



Incident Numbers: nKJ1600727914,
nOY1711838821

Remediation Closure

Rattlesnake Federal Unit #001

Section 26, Township 26 South, Range 34 East

API: 30-015-36928

County: Lea

Vertex File Number: 23E-04815

Prepared for:

Devon Energy Production Company, LP

Prepared by:

Vertex Resource Services Inc.

Date:

January 2025

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Section 26, Township 26 South, Range 34 East

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Prepared for:

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March 13, 2025

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March 13, 2025

Date

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1.0 Introduction

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Remediation Closure for produced water and crude oil releases that occurred on December 24, 2015, and April 6, 2017, respectively, at Rattlesnake Federal Unit #001 API: 30-015-36928 (hereafter referred to as the “site”). Devon submitted an initial C-141 Release Notification to New Mexico Oil Conservation Division (NMOCD) on January 7, 2016, and April 28, 2017 (Appendix A). Incident Identification numbers nKJ1600727914 and nOY1711838821 were assigned to these incidents.

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 completed following remediation activities as per NMAC 19.15.29.13.

2.0 Incident Description

The releases occurred on December 24, 2015, and April 6, 2017, due to equipment failure on stuffing box well and corrosion on a production tank due to hole on bottom of oil tank. The incidents were reported on January 7, 2016, and April 28, 2017, and involved the release of approximately 10 barrels (bbl) of produced water and approximately 20 bbl of crude oil on the pad site. Approximately 7 bbl of free fluid was removed during initial clean-up of produced water. Approximately 0 bbl. of free fluid was removed during the initial clean-up of crude oil. Additional details relevant to the releases are presented in the C-141 Report (Appendix A).

3.0 Site Characteristics

The site is located approximately 19 miles southwest of Jal, New Mexico (Google Inc. 2024). The legal location for the site is Section 26, Township 26 South and Range 34 East in Lea County, New Mexico. The release area is located on federal property. An aerial photograph and site schematic are presented on Figure 1.

The *Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2024) indicates the site’s surface geology primarily comprises Qep – Eolian and piedmont deposits (Holocene to middle Pleistocene) and is characterized as Interlayered eolian sands and piedmont-slope deposits. Predominant soil texture on the site is Pyote and Maljamar fine sand (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Additional soil characteristics include a drainage class of well drained with negligible runoff. The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018).

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. The following sections specifically describe the release area at the site on or in proximity to the constructed pad (Figure 1). The surrounding landscape is associated with fan piedmonts, alluvial fans, and dunes with elevations ranging between 2,800 and 5,00 feet. The climate is semiarid with average annual precipitation ranging between 8 and 13 inches. Using information from the United States Department of Agriculture, the dominant vegetation

was determined to be grasses and shrubs. Black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), dominate the historical plant community (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

4.0 Closure Criteria Determination

The nearest active well to the site is a New Mexico Office of the State Engineer (NMOSE) monitoring well located approximately 0.36 miles northeast of the location (United States Geological Survey, 2024). Data from C-04809-POD1 shows the NMOSE borehole recorded a depth to groundwater of greater than 102 feet below ground surface (bgs). Documentation related to the exploratory borehole is included in Appendix B.

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 located approximately 1.41 miles northwest of the site (United States Fish and Wildlife Service, 2024). Closure criteria research is included in Appendix B.

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.

Table 1. Closure Criteria Determination			
Site Name: Rattlesnake Federal Unit #001			
Spill Coordinates: 32.0185623,-103.4385986		X: 647461	Y: 3543559
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	>102	feet
	Distance between release and nearest DTGW reference	1,909	feet
		0.36	miles
	Date of nearest DTGW reference measurement	March 5, 2024	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	7,441	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	15,000	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	56,500	feet
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	28,266	feet
	ii) Within 1000 feet of any fresh water well or spring	28,266	feet
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)
7	Within 300 feet of a wetland	9,727	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	182,777	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	34,419	feet
10	Within a 100-year Floodplain	Undetermined	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	90,345	feet
11	Soil Type	Loamy fine sand, sandy clay loam	
12	Ecological Classification	Loamy sand	
13	Geology	Eolian and piedmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>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 to Remediation & Reclamation Standards		
	Constituent	Limit
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	Chloride	20,000 mg/kg
DTGW 51-100 feet (19.15.29.12)	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

TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics

BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

Characterization of the historical releases were completed between September 11 and December 21, 2023, which identified the area of the releases specified in the initial C-141 Reports. The impacted area of incident nKJ1600727914 was determined to be approximately 7,618 square feet; The impacted area of incident nOY1711838821 was determined to be approximately 2,827 square feet. Daily Field Reports associated with the characterization are included in Appendix B. Characterization sampling laboratory results are presented in Table 3.

Remediation efforts began on November 22, 2024, and were finalized on December 5, 2024. Vertex personnel supervised the excavation of impacted soils. Field screening was completed with a total of 70 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and titration of silver nitrate (chloride). Field screening results were used to identify areas requiring further remediation. Soil was removed to a depth of 1-foot bgs, 3 feet bgs, and 4.1 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Daily Field Reports documenting various phases of the remediation are presented in Appendix C.

Notification that confirmatory samples were being collected was provided to the NMOCD on December 5, 2024. Due to human error, these notifications were submitted under the incorrect incident number. A notification variance was approved on March 13, 2025 and correspondence regarding the approval can be found in Appendix E. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 59 base samples and 11 wall samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Envirotech Analytical 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 4, and the laboratory data reports are included in Appendix

D. All confirmatory samples collected and analyzed were below closure criteria for the site. Upon review, the original backfill material did not meet the necessary closure criteria for TPH and was therefore removed from the site. To ensure compliance, backfill material from an alternate source was brought in. A 5-point composite sample was collected from the new material, which was found to meet the required closure criteria. This material was then used to cover the excavation in accordance with closure requirements and labeled as Backfill-2 in Table 4.

6.0 Closure Request

The release area was fully delineated, remediated, and confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a Release locations "greater than 100 feet to groundwater". Based on these findings Devon request that this release be closed.

Should you have any questions or concerns, please do not hesitate to contact Sally Carttar at 575.361.3561 or scarttar@vertexresource.com.

7.0 References

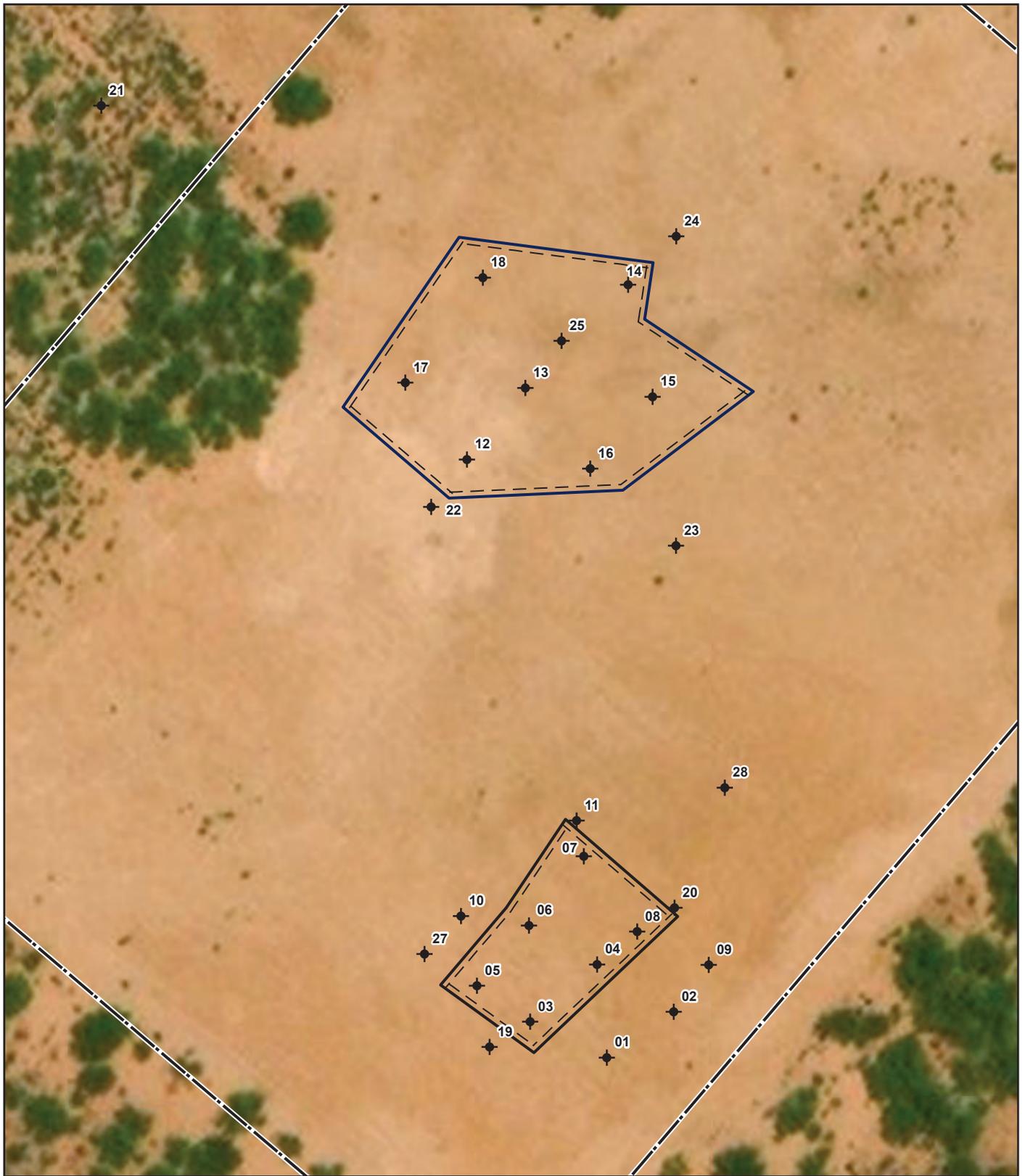
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8.0 Limitations

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 Bureau of Land Management, 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



- ◆ Borehole (Prefixed by "BH23-")
- ▭ North Area of Concern (~7,618 sq.ft.)
- - - Approximate Lease Boundary
- ▭ South Area of Concern (~2,827 sq.ft.)



0 10 20 40 ft
 NAD 1983 UTM Zone 13N
 Date: Dec 17/24

Map Center:
 Lat: 32.018434°N
 Long: 103.438536°W



Characterization Site Sampling Schematic
Rattlesnake Federal Unit #001

FIGURE: **1**

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: Georeferenced image from Esri, 2023. Approximate lease boundary from imagery by Vertex Professional Services Ltd. (VPS), 2024. Site features from GPS by VPS, 2024.

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- Base Sample (Prefixed by "BS24-")
- ▲ Wall Sample (Prefixed by "WS24-")
- ⬭ Approximate Lease Boundary
- ⬭ Excavation to 1' bgs (~ 2,342 sq. ft. | 200 ft.)
- ⬭ Excavation to 3' bgs (~ 1,122 sq. ft. | 152 ft.)
- ⬭ Excavation to 4' bgs (~ 405 sq.ft. | 100 ft.)
- ⬭ Excavation to 4' bgs (~7,488 sq. ft. | 344 ft.)



0 10 20 40 ft
 NAD 1983 UTM Zone 13N
 Date: Dec 12/24

Map Center:
 Lat: 32.018342°N
 Long: 103.438494°W

Confirmation Site Sampling Schematic
Rattlesnake Federal Unit #001



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: Georeferenced image from Esri, 2023. Approximate lease boundary from imagery by Vertex Professional Services Ltd. (VPS), 2024. Site features from GPS by VPS, 2024.

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TABLES

Client Name: Devon Energy Production Company, LP
 Site Name: Rattlesnake Federal Unit #001
 NMOCD Tracking #: nKJ1600727914, nOY1711838821
 Project #: 23E-04815
 Lab Reports: 2309637, 2309763, 2369918, 2309971, 2310830, 2312F02, and 2312F03

Table 3 . Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater 100- 500 feet bgs

Sample Description			Laboratory Results								
Sample ID	Depth (ft)	Sample Date	Petroleum Hydrocarbons							Inorganic Chloride Concentration (mg/kg)	
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)		
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)		
BH23-01	0	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	4	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	71
BH23-02	0	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-03	0	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	1400
	2	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	4	September 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-04	0	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	100
	4	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	450
BH23-05	0	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	230
	2	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	600
	4	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	1600
	5	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	230
BH23-06	0	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	680
	2	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	180
	4	September 12, 2023	ND	ND	ND	14	ND	14	14	14	150
BH23-07	0	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	1100
	2	September 12, 2023	ND	ND	ND	12	ND	12	12	12	370
	4	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	200
BH23-08	0	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	690
	2	September 12, 2023	ND	ND	ND	11	ND	11	11	11	190
	4	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	130
BH23-09	0	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	170
	2	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	62
	4	September 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-10	0	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	240
	2	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	98
BH23-11	0	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	240
	2	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	250



Client Name: Devon Energy Production Company, LP
 Site Name: Rattlesnake Federal Unit #001
 NMOCD Tracking #: nKJ1600727914, nOY1711838821
 Project #: 23E-04815
 Lab Reports: 2309637, 2309763, 2369918, 2309971, 2310830, 2312F02, and 2312F03

Table 3 . Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater 100- 500 feet bgs

Sample Description			Laboratory Results							
Sample ID	Depth (ft)	Sample Date	Petroleum Hydrocarbons							Inorganic Chloride Concentration (mg/kg)
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
BH23-12	0	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	170
	2	September 14, 2023	ND	ND	ND	53	87	53	140	1700
	4	September 14, 2023	ND	ND	ND	270	470	270	740	3100
	6	December 20, 2023	ND	ND	ND	ND	ND	ND	ND	1500
	8	December 20, 2023	ND	ND	ND	ND	ND	ND	ND	570
BH23-13	0	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	160
	4	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	360
BH23-14	0	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	4600
	2	September 14, 2023	ND	ND	ND	33	ND	33	33	620
	4	September 14, 2023	ND	ND	ND	ND	ND	ND	ND	550
BH23-15	0	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	0
	2	September 15, 2023	ND	ND	ND	370	510	370	880	2100
	4	December 20, 2023	ND	ND	ND	ND	ND	ND	ND	460
	6	December 20, 2023	ND	ND	ND	ND	ND	ND	ND	450
	8	December 20, 2023	ND	ND	ND	ND	ND	ND	ND	470
BH23-16	0	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	810
	3	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	1900
BH23-17	0	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	2600
	2	September 15, 2023	ND	ND	ND	10	ND	10	10	2000
	4	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	2000
	6	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	1800
	8	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	2100
BH23-18	0	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	680
	2	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	780
	4	September 15, 2023	ND	ND	ND	ND	ND	ND	ND	2000
	6	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	170
BH23-19	0	October 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	October 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-20	0	October 14, 2023	ND	ND	ND	ND	ND	ND	ND	310
	2	October 14, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-21	0	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	120



Client Name: Devon Energy Production Company, LP
 Site Name: Rattlesnake Federal Unit #001
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Table 3 . Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater 100- 500 feet bgs

Sample Description			Laboratory Results								
Sample ID	Depth (ft)	Sample Date	Petroleum Hydrocarbons							Inorganic Chloride Concentration (mg/kg)	
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)		
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)		
BH23-22	0	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	560
	2	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	510
BH23-23	0	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	October 16, 2023	ND	ND	ND	14	ND	14	14	14	240
BH23-24	0	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	540
	2	October 16, 2023	ND	ND	ND	28	ND	28	28	28	180
BH23-25	0	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	October 16, 2023	ND	ND	ND	20	ND	20	20	20	ND
	4	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5	October 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-27	0	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	ND	67
	2	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	ND	65
BH23-28	0	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	December 21, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND

"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: Rattlesnake Federal Unit #001
 NMOCD Tracking #: nOY1711838821 and nKJ1600727914
 Project #: 24E-04918
 Lab Report #: E412065, E412066, E412067, E412068, and H250259

Table 4. Confirmation Sample Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	GRO + DRO (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	
										Chloride Concentration (mg/kg)
Depth to Groundwater >100'										
BS24-01	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	228
BS24-02	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	224
BS24-03	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	168
BS24-04	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	187
BS24-05	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	149
BS24-06	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	169
BS24-07	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	201
BS24-08	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	154
BS24-09	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	127
BS24-10	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	148
BS24-11	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	196
BS24-12	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	122
BS24-13	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	90.4
BS24-14	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	40
BS24-15	1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	77
BS24-16	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-17	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-18	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-19	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	92.1
BS24-20	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	101
BS24-21	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-22	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	81.8
BS24-23	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	87.3
BS24-24	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-25	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	20.3
BS24-26	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	65.9
BS24-27	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	126
BS24-28	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	32.1
BS24-29	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	140
BS24-30	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	89.2
BS24-31	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	185
BS24-32	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	72
BS24-33	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-34	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	189
BS24-35	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	245
BS24-36	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	89.3
BS24-37	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	135
BS24-38	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	62
BS24-39	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND

Client Name: Devon Energy Production Company, LP
 Site Name: Rattlesnake Federal Unit #001
 NMOCD Tracking #: nOY1711838821 and nKJ1600727914
 Project #: 24E-04918
 Lab Report #: E412065, E412066, E412067, E412068, and H250259

Table 4. Confirmation Sample Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	GRO + DRO (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	
										Chloride Concentration (mg/kg)
Depth to Groundwater >100'										
BS24-40	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	29
BS24-41	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	79.5
BS24-42	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	106
BS24-43	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	121
BS24-44	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	106
BS24-45	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
BS24-46	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	79.1
BS24-47	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	56
BS24-48	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	91
BS24-49	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	246
BS24-50	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	83.3
BS24-51	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	181
BS24-52	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	38.9
BS24-53	4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	87.5
BS24-54	3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	209
BS24-55	3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	158
BS24-56	3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	94.2
BS24-57	3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	129
BS24-58	3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	23
BS24-59	3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	ND
WS24-01	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	108
WS24-02	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	83.4
WS24-03	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	44.7
WS24-04	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	78.3
WS24-05	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	163
WS24-06	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	81.4
WS24-07	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	160
WS24-08	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	200
WS24-09	0-3	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	60.9
WS24-10	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	227
WS24-11	0-4.1	December 5, 2024	ND	ND	ND	ND	ND	ND	ND	168
Backfill	0	December 5, 2024	ND	ND	ND	832	430	832	1262	136
Backfill-2	0	January 14, 2025	ND	ND	ND	ND	ND	ND	ND	64

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company Devon Energy Production Company	Contact Randy Gladden, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-513-9463
Facility Name Rattlesnake Federal Unit 1	Facility Type Oil
Surface Owner Federal	Mineral Owner Federal
API No 30-025-36928	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	26	26S	34E	1100	North	1980	East	Lea

Latitude: N 32°01'06.8"

Longitude: W 103°26'18.8"

NATURE OF RELEASE

Type of Release Spill Produced Water	Volume of Release 10 BBLS	Volume Recovered 7 BBLS
Source of Release Stuffing box on well head	Date and Hour of Occurrence 12/24/2015 @ 12:30pm	Date and Hour of Discovery 12/24/2015 @ 12:30pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM Jim Amos OCD Kellie Jones	
By Whom? Randy Gladden, Production Foreman	Date and Hour BLM 12/24/15 @ 1:35pm OCD 12/24/15 @ 1:45pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse N/A	

RECEIVED

By Kellie Jones at 7:43 am, Jan 07, 2016

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.*

Well had been shut in and upon pressuring up the well to return it to production, produced water was released from stuffing box on the well head. Rod rams were shut and the BOP (Blow Out Preventer) was screwed in immediately to prevent further release of produced water.

Describe Area Affected and Cleanup Action Taken.*

10 BBLS of produced water was released affecting an area approximately 10ft x 60ft on the east side of the location. A Vacuum truck recovered 7 BBLS of produced water. All released produced water stayed on location. Environmental agency will be contacted for remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Sarah Gallegos-Troublefield</i>	OIL CONSERVATION DIVISION	
Printed Name: Sarah Gallegos-Troublefield	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Admin Support	Approval Date: 01/07/2016	Expiration Date: 03/07/2016
E-mail Address: Sarah.Gallegos-Troublefield@dmv.com	Conditions of Approval: Site samples required. Delineate and remediate as per MNOCD guides. Geotag photographs of remediation recommended.	Attached <input type="checkbox"/> IRP-4081
Date: 1/05/2016 Phone: 575.748.1864		

* Attach Additional Sheets If Necessary

nKJ1600727914
pKJ1600728070

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
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1220 South St. Francis Dr.
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Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company Devon Energy Production Company	Contact Randy Gladden, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-513-9463
Facility Name Rattlesnake Federal Unit #001	Facility Type Oil
Surface Owner Federal	Mineral Owner Federal
API No 30-025-36928	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	26	26S	34E	1100	FNL	1980	FEL	Lea

Latitude: 32.0185623

Longitude: 103.4385986

NATURE OF RELEASE

Type of Release Oil	Volume of Release 19.5BBLS oil	Volume Recovered 0.00
Source of Release Hole in oil tank	Date and Hour of Occurrence 4/6//2017 @ 7:23am	Date and Hour of Discovery 4/6/2017 @ 7:23am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM-Shelly Tucker OCD-Olivia Yu	
By Whom? Christopher West, Assistant Production Foreman	Date and Hour BLM-4/6/2017 @ 11:45AM OCD-4/6/2017 @ 11:46AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

RECEIVED
By Olivia Yu at 10:36 am, Apr 28, 2017

Describe Cause of Problem and Remedial Action Taken.*
A hole was discovered in the bottom of an oil tank which resulted in a release of 19.5BBLS of oil. No fluid was recovered from the containment. The well was already shut in (under engineer evaluation). A remediation contractor will be contacted to assist with delineation and remediation efforts.

Describe Area Affected and Cleanup Action Taken.*
A hole was discovered in the bottom of an oil tank which resulted in a release of 19.5BBLS of oil. The total area affected by the release was 70' X 25'. A vacuum truck was called in to remove the remaining fluid from inside the tank. Repairs will be made to the tank.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Dana DeLaRosa</i>	OIL CONSERVATION DIVISION	
Printed Name: Dana DeLaRosa	Approved by Environmental Specialist: <i>my</i>	
Title: Field Admin Support	Approval Date: 4/28/2017	Expiration Date:
E-mail Address: Dana.DeLaRosa@dvn.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 04/17/2017 Phone: 575.746.5594		

* Attach Additional Sheets If Necessary

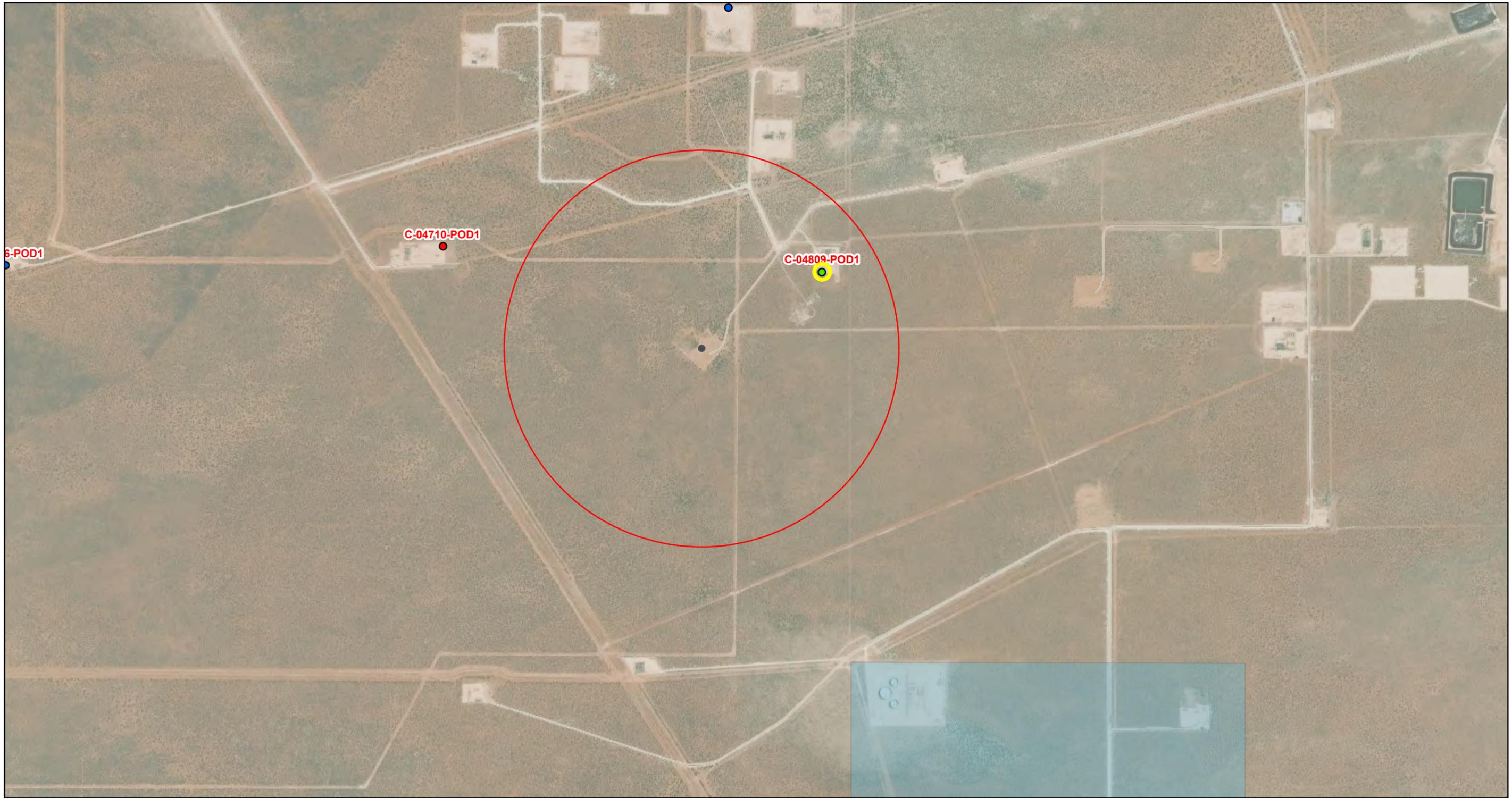
1RP-4686

pOY1711839667

nOY1711838821

APPENDIX B – Closure Criteria Research Documentation

OSE POD 0.5 miles



1/19/2025, 5:30:57 PM

GIS WATERS PODs

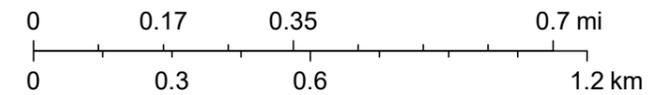
- Active
- Pending
- Plugged

OSE District Boundary

Water Right Regulations

- Closure Area
- New Mexico State Trust Lands
- Both Estates

1:18,056



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

Water Column/Average Depth to Water

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Distance	Well Depth	Depth Water	Water Column	
C 04710 POD1		CUB	LE	SE	SE	SE	22	26S	34E	646399.7	3543956.9		1133				
C 04856 POD1		CUB	LE	NE	SW	NE	23	26S	34E	647550.6	3544940.3		1384	105			
C 04817 POD1		CUB	LE	SW	SE	SW	13	26S	34E	648499.2	3545657.3		2341	105			
C 04852 POD1		CUB	LE	NE	NW	NE	24	26S	34E	649057.5	3545374.4		2417	55			
C 04836 POD1		CUB	LE	SE	SE	SE	21	26S	34E	644618.7	3543853.3		2857	105			
C 04791 POD1		CUB	LE	SE	SE	SE	13	26S	34E	649598.8	3545568.0		2933	60			
C 04583 POD1		CUB	LE	SW	SW	SW	15	26S	34E	644919.7	3545643.4		3286	55			
C 04820 POD1		CUB	LE	NE	NW	NW	13	26S	34E	648389.9	3547088.9		3650	55			
C 04890 POD1		CUB	LE	SW	NW	NW	18	26S	35E	649642.3	3546842.3		3941	55	55	0	

Average Depth to Water: **55 feet**

Minimum Depth: **55 feet**

Maximum Depth: **55 feet**

Record Count: 9

UTM Filters (in meters):

Easting: 647461

Northing: 3543559

Radius: 005000

* UTM location was derived from PLSS - see Help

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

1/19/25 5:12 PM MST

Water Column/Average Depth to Water

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Active & Inactive Points of Diversion (with Ownership Information)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)					(NAD83 UTM in meters)		Map	Distance (meters)
											q64	q16	q4	Sec	Tws	Range	X		
C 04809	CUB	MON	0.000	DEVON ENERGY PRODUCTION CO.	LE	C 04809.POD1	NA			NE	NE	NE	26	26S	34E	647948.9	3543876.1		581.9
C 04710	CUB	MON	0.000	DEVON ENERGY	LE	C 04710.POD1	NA			SE	SE	SE	22	26S	34E	646399.7	3543956.9		1,133.4
C 04856	CUB	EXP	0.000	DEVON ENDERY PRODUCTION CO.	LE	C 04856.POD1	NA			NE	SW	NE	23	26S	34E	647550.6	3544940.3		1,384.2
C 04817	CUB	MON	0.000	DEVON ENERGY RESOURCES	LE	C 04817.POD1	NA			SW	SE	SW	13	26S	34E	648499.2	3545657.3		2,341.1
C 04852	CUB	EXP	0.000	RAYBAW OPERATING, LLC	LE	C 04852.POD1	NA			NE	NW	NE	24	26S	34E	649057.5	3545374.4		2,417.5
C 04836	CUB	MON	0.000	DEVON ENERGY PRODUCTION COMPAN	LE	C 04836.POD1	NA			SE	SE	SE	21	26S	34E	644618.7	3543853.3		2,857.5
C 04791	CUB	MON	0.000	DEVON ENERGY RESOURCES	LE	C 04791.POD1	NA			SE	SE	SE	13	26S	34E	649598.8	3545568.0		2,933.6
C 04583	CUB	MON	0.000	LUCID ENERGY GROUP	LE	C 04583.POD1	NA			SW	SW	SW	15	26S	34E	644919.7	3545643.4		3,286.8
C 04820	CUB	MON	0.000	DEVON ENERGY	LE	C 04820.POD1	NA			NE	NW	NW	13	26S	34E	648389.9	3547088.9		3,650.1
C 04890	CUB	MON	0.000	OWL OPERATING SWD, LLC	LE	C 04890.POD1	NA			SW	NW	NW	18	26S	35E	649642.3	3546842.3		3,941.8
C 04601	CUB	MON	0.000	MARATHON OIL	LE	C 04601.POD1	NA			SW	SE	SW	05	26S	35E	651709.8	3548919.7		6,840.3
C 04827	CUB	MON	0.000	TETRA TECH ON BEHALF OF CONOCO PHILLIPS	LE	C 04827.POD1	NA			NW	SW	SW	08	26S	34E	641658.9	3547317.7		6,913.2
C 04846	CUB	MON	0.000	DEVON ENERGY CORP.	LE	C 04846.POD1	NA			SW	NE	NW	06	26S	35E	650048.2	3550110.5		7,043.8
C 04626	CUB	EXP	0.000	DEVON ENERGY	LE	C 04626.POD1	NA			SE	NE	NW	18	26S	34E	640644.5	3546672.6		7,493.9
C 04793	CUB	EXP	0.000	DEVON ENERGY RESOURCES	LE	C 04793.POD1	NA			NW	SE	NW	27	26S	35E	655087.8	3543576.1		7,626.8
C 02295	CUB	PLS	3.000	INTREPID POTASH NEW MEXICO LLC	LE	C 02295				NE	NE	SE	12	26S	33E	639864.9	3547624.4		8,615.6
C 03442	C	STK	3.000	INTREPID POTASH NEW MEXICO LLC	LE	C 03442.POD1			Shallow	SE	NW	NE	06	26S	34E	641055.8	3550028.1		9,103.6
C 03477	C	PRO	0.000	EOG RESOURCES, INC.	LE	C 03442.POD1			Shallow	SE	NW	NE	06	26S	34E	641055.8	3550028.1		9,103.6
C 03492	C	PRO	0.000	EOG RESOURCES, INC	LE	C 03442.POD1			Shallow	SE	NW	NE	06	26S	34E	641055.8	3550028.1		9,103.6
C 02292	CUB	PLS	3.000	DINWIDDIE CATTLE CO.	LE	C 02292.POD1				SE	NW	NE	06	26S	34E	640991.6	3549987.2		9,120.0
C 03493	C	PRO	0.000	EOG RESOURCES, INC.	LE	C 02292.POD1				SE	NW	NE	06	26S	34E	640991.6	3549987.2		9,120.0
C 03441	C	STK	3.000	INTREPID POTASH NEW MEXICO LLC	LE	C 03441.POD1			Shallow	SE	NW	NE	06	26S	34E	640970.7	3550039.6		9,171.8
C 03491	C	PRO	0.000	EOG RESOURCES, INC	LE	C 03441.POD1			Shallow	SE	NW	NE	06	26S	34E	640970.7	3550039.6		9,171.8
C 02291	CUB	PLS	3.000	INTREPID POTASH NEW MEXICO LLC	LE	C 02291				NW	NW	NE	06	26S	34E	640825.0	3550140.0 *		9,345.9
C 04265	CUB	GEO	0.000	EOG RESOURCES	LE	C 04265.POD1	NA			NE	SW	NW	32	25S	34E	641842.1	3551281.5		9,550.3

Record Count: 25

Filters Applied:

UTM Filters (in meters):

Easting: 647461

Northing: 3543559

Radius: 010000

Sorted By: Distance

* UTM location was derived from PLSS - see Help

Water Right Summary



[get image list](#)

WR File Number: C 04809	Subbasin: CUB	Cross Reference:
Primary Purpose: MON MONITORING WELL		
Primary Status: PMT Permit		
Total Acres:	Subfile:	Header:
Total Diversion: 0.000	Cause/Case:	
Owner: ENSOLUM LLC	Owner Class: Agent	
Contact: ASHLEY GIOVENGO		
Owner: DEVON ENERGY PRODUCTION CO.	Owner Class: User	
Contact: DALE WOODALL		

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	755944	EXPL	2024-02-09	PMT	APR	C-4809 POD1	T	0.000	0.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C_04809_POD1	NA		NE	NE	NE	26	26S	34E	647948.9	3543876.1		BH01

* UTM location was derived from PLSS - see Help

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

1/19/25 5:20 PM MST

Water Rights Summary

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WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO) POD1		WELL TAG ID NO N/A		OSE FILE NO(S) C-04809		
	WELL OWNER NAME(S) Devon Energy Production Company				PHONE (OPTIONAL) 575-748-1838		
	WELL OWNER MAILING ADDRESS 205 E. Bender Road #150				CITY Hobbs	STATE ZIP Nm 88240	
	WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84	
		LATITUDE	32	1			
	LONGITUDE	-103	26	0.186	W		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Unit P, Section 23, Township 26S, Range 34E, Lea County, New Mexico							

2. DRILLING & CASING INFORMATION	LICENSE NO WD1188		NAME OF LICENSED DRILLER John Scarborough			NAME OF WELL DRILLING COMPANY John Scarborough Drilling Inc.		
	DRILLING STARTED 03/05/2024		DRILLING ENDED 03/05/2024		DEPTH OF COMPLETED WELL (FT) 102	BORE HOLE DEPTH (FT) 102	DEPTH WATER FIRST ENCOUNTERED (FT) N/A	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		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)
	FROM	TO						
	0	102	5.00	Soil Boring	-	-	-	-

3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
	FROM	TO				
				N/A		

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 04/30/19)			
FILE NO.	POD NO.	TRN NO.			
LOCATION	WELL TAG ID NO.			PAGE 1 OF 2	

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		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)
	FROM	TO				
	0	10	10		Y ✓ N	
	10	20	10	Sand, trace gravel, brown to tan, med to fine grain, nonuniform	Y ✓ N	
	20	30	10	Sand with gravel, red to tan, med to fine grain, samll to large gravel	Y ✓ N	
	30	40	10	Sandy clay, med to dark brown, noncohesive, uniform	Y ✓ N	
	40	50	10	Sand, light to med brown, fine to medium grain, noncohesive, uniform	Y ✓ N	
	50	60	10	Sand, light to red, fine to med grain size, noncohesive, uniform	Y ✓ N	
	60	70	10	Sand with trace gravel, grey, mostly medium, to fine, noncohesive, nonuniform	Y ✓ N	
	70	80	10	Sandy clay, grey to med brown, fine to very fine grain size, noncohesive	Y ✓ N	
	80	90	10	Caliche, white to grey, thickly bedded, interbedded with sand	Y ✓ N	
	90	100	10	Caliche, brown to red thickly bedded, interbedded with brown to red sand	Y ✓ N	
	100	102	2	Sand with trace gravel, tan to light brown, fine to med fine grain	Y ✓ N	
	102	102	0	caliche, white to grey	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:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:						

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: Temporary well material removed and soil boring backfilled using drill cuttings from total depth to 10 ft below ground surface (bgs), then hydrated bentonite chips 10 ft bgs to ground surface.
		PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Scott Scarborough

6. SIGNATURE	BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.	
	Scott Scarborough <small>Digitally signed by Scott Scarborough Date: 2024.03.25 09:29:53 -06'00'</small>	Scott Scarborough 03/25/2024
	SIGNATURE OF DRILLER / PRINT SIGNEE NAME	DATE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 04/30/2019)	
FILE NO.	POD NO.	TRN NO.	
LOCATION	WELL TAG ID NO.		PAGE 2 OF 2



Rattlesnake Federal Unit #001

Watercourse 7,44ft



August 9, 2023

Wetlands

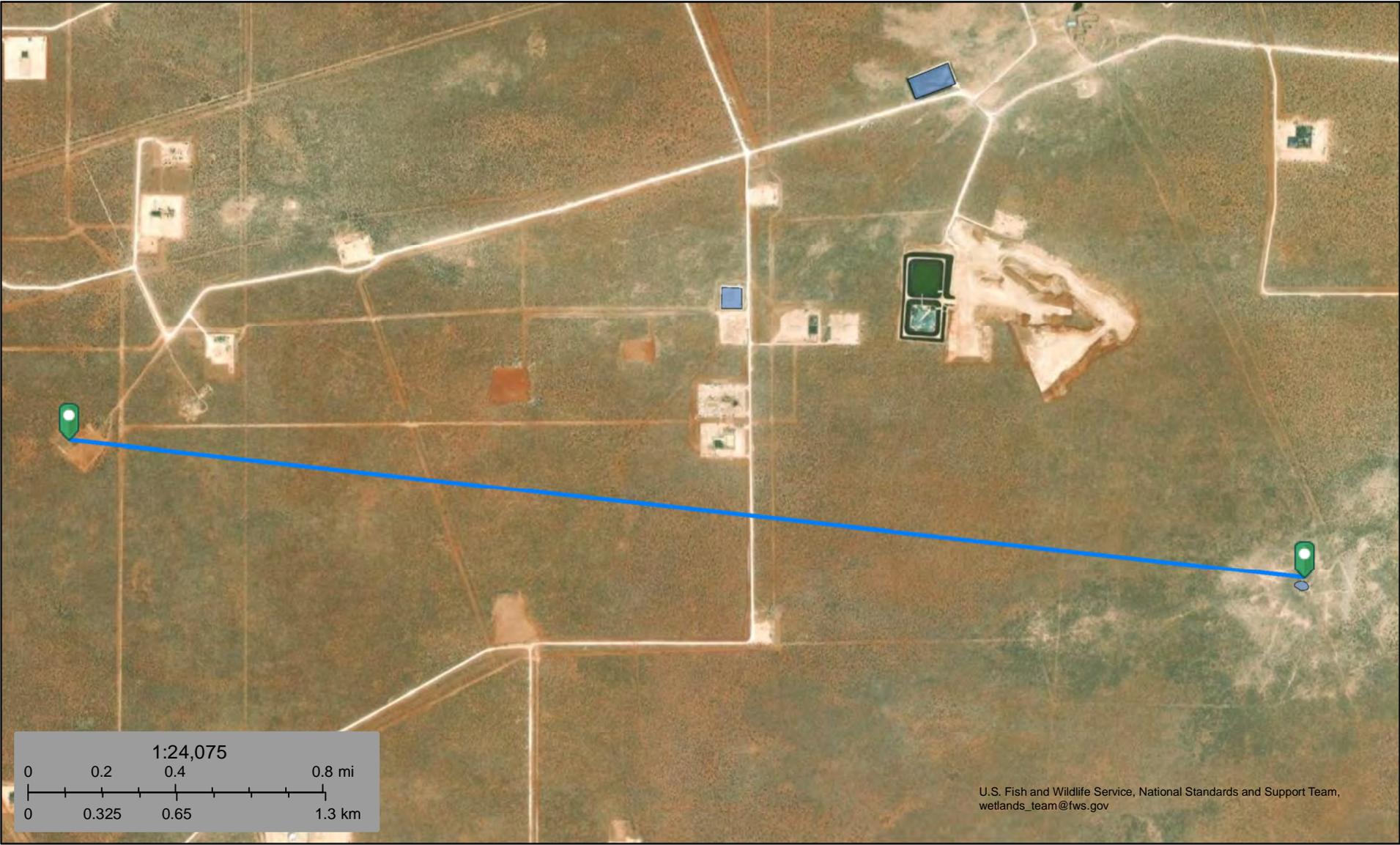
- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Lake
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Other
- Riverine

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.



Rattlesnake Federal #001

Pond 15,000 feet



August 9, 2023

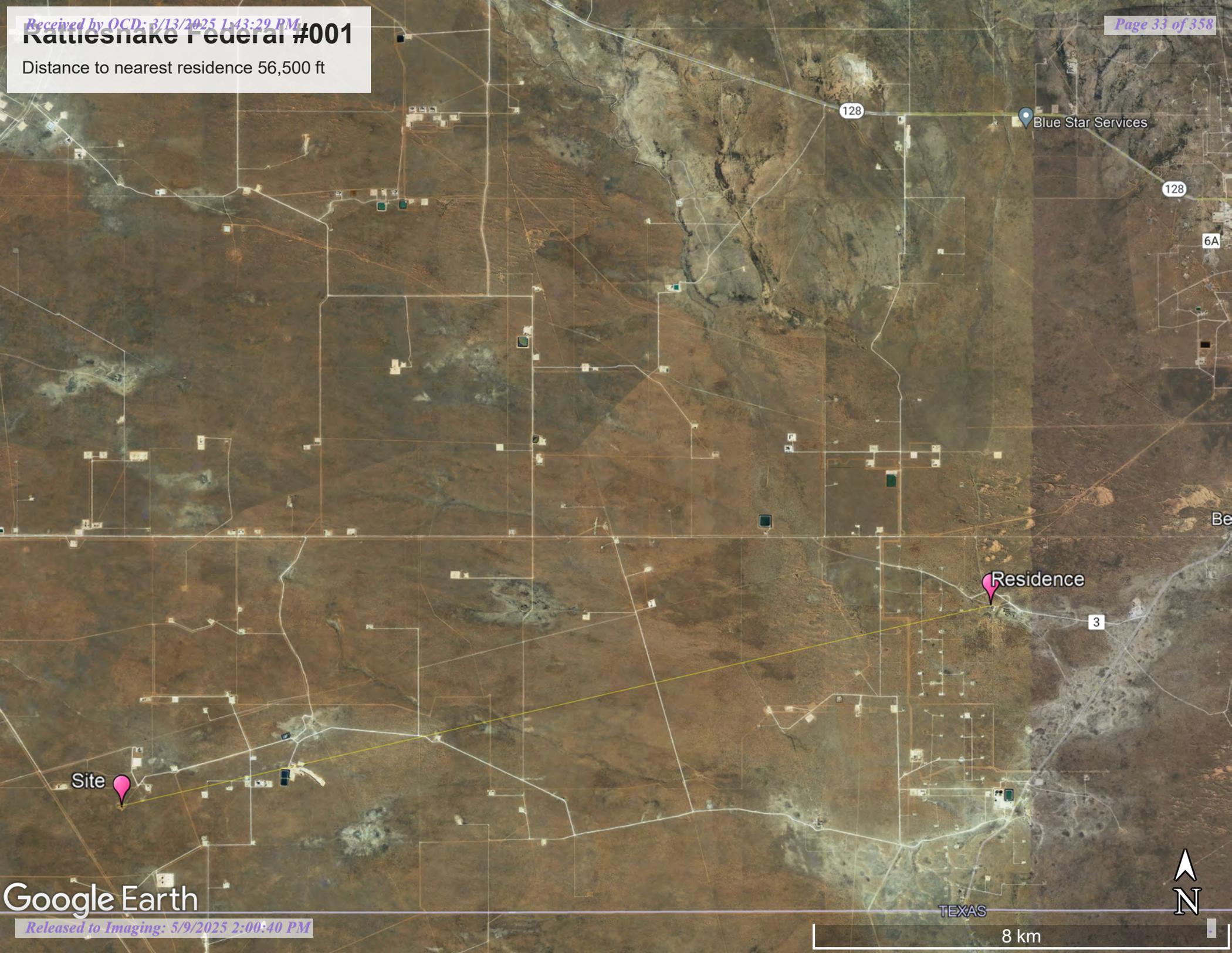
Wetlands

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

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Rattlesnake Federal #001

Distance to nearest residence 56,500 ft



Blue Star Services

128

128

6A

Residence

3

Site



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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
C 02295		NE	NE	SE	12	26S	33E	639864.9	3547624.4	

* UTM location was derived from PLSS - see Help

Driller License:	122	Driller Company:	UNKNOWN
Driller Name:	UNKNOWN		
Drill Start Date:		Drill Finish Date:	1949-12-31
		Plug Date:	
Log File Date:		PCW Rcv Date:	
		Source:	
Pump Type:		Pipe Discharge Size:	
		Estimated Yield:	12
Casing Size:	8.00	Depth Well:	250
		Depth Water:	200

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

1/19/25 5:25 PM MST

Point of Diversion Summary

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Water Right Summary



[get image list](#)

WR File Number:	C 02295	Subbasin:	CUB	Cross Reference:	
Primary Purpose:	PLS NON 72-12-1 LIVESTOCK WATERING				
Primary Status:	DCL Declaration				
Total Acres:	0.000	Subfile:		Header:	
Total Diversion:	3.000	Cause/Case:			
Owner:	INTREPID POTASH NEW MEXICO LLC	Owner Class:	Owner		
Contact:	KATIE KELLER				

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
673898	673898	UWL	2020-05-15	UWL	ACC	C 02295	T	0.000	0.000	
652904	652904	COWNF	2019-06-11	CHG	PRC	C 02295	T	0.000	0.000	
648787	648787	COWNF	2019-03-20	CHG	PRC	C 02295	T	0.000	0.000	
198381	198381	DCL	1993-02-02	DCL	PRC	C-02295	T	0.000	3.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 02295			NE	NE	SE	12	26S	33E	639864.9	3547624.4		

* UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	POD Number	Source
1949-12-31	DCL	0.000	3.000	C 02295	

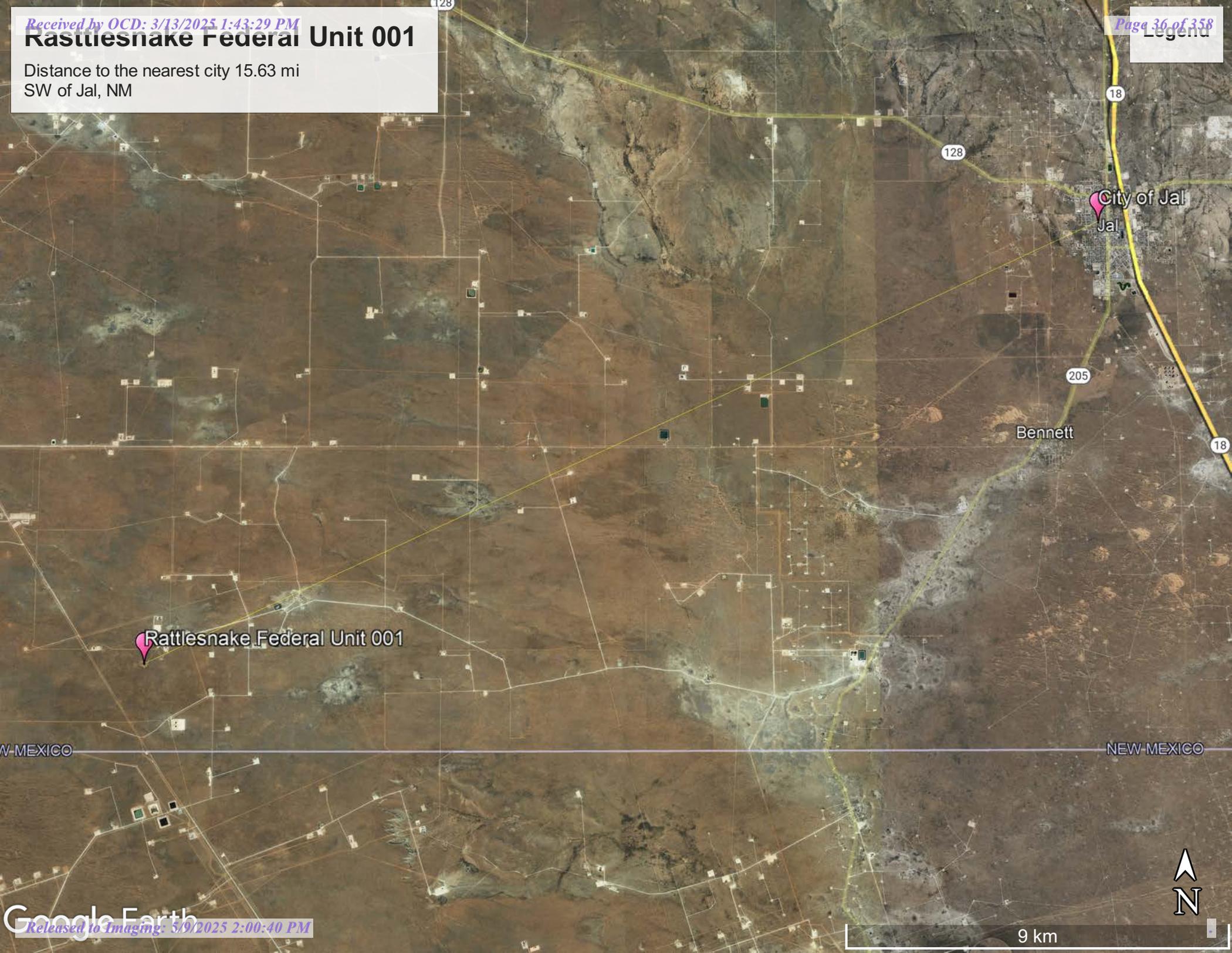
Place of Use

Q256	Q64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0.000	3.000		PLS	1943-12-31	DCL	NO PLACE OF USE GIVEN

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

Rattlesnake Federal Unit 001

Distance to the nearest city 15.63 mi
SW of Jal, NM



Rattlesnake Federal Unit 001

City of Jal

Bennett

NEW MEXICO

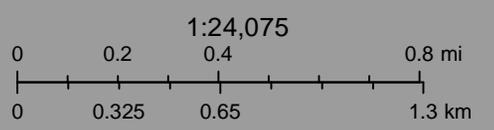
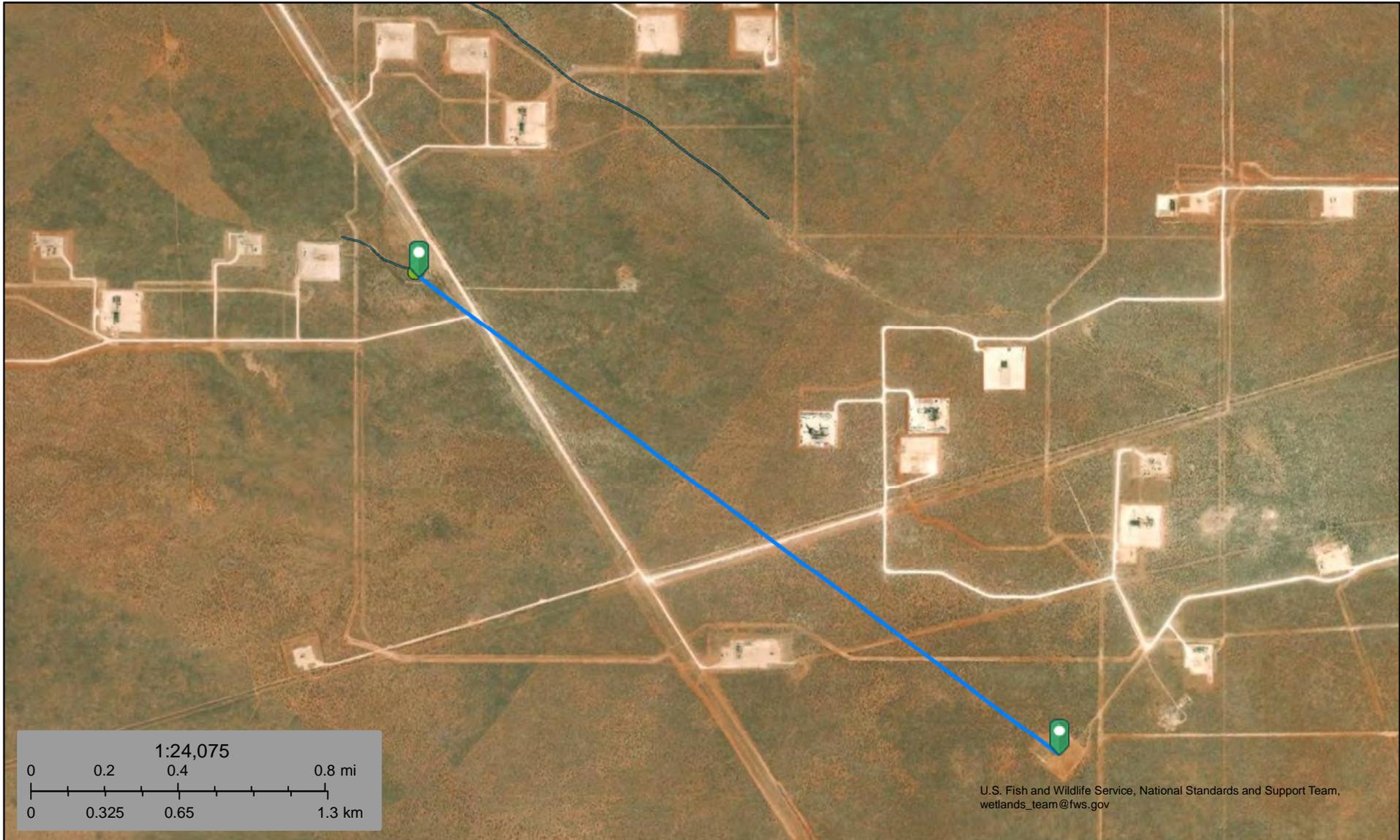
NEW MEXICO



U.S. Fish and Wildlife Service
National Wetlands Inventory

Rattlesnake Federal Unit #001

Wetland 9,727ft



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

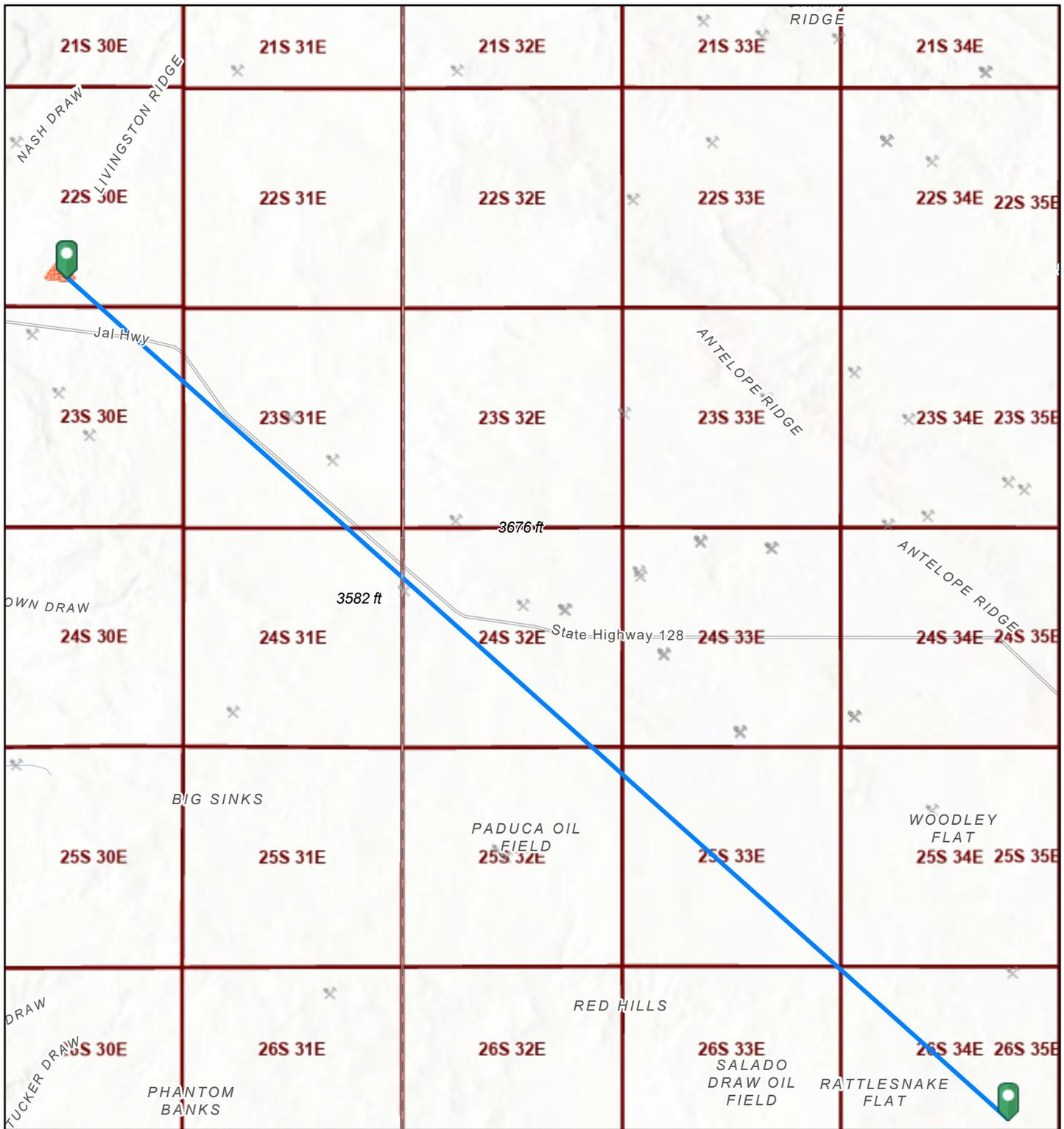
August 9, 2023

Wetlands

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

Rattlesnake Federal #001 182,777 ft

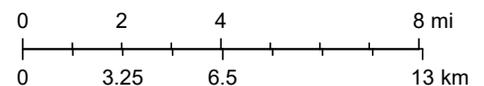


1/19/2025, 4:50:38 PM

1:288,895

Registered Mines

- ✕ Aggregate, Stone etc.
- ✕ Aggregate, Stone etc.
- ✕ Aggregate, Stone etc.
- ▲ Potash
- ▭ PLSS Townships



Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, METI/ NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, BLM

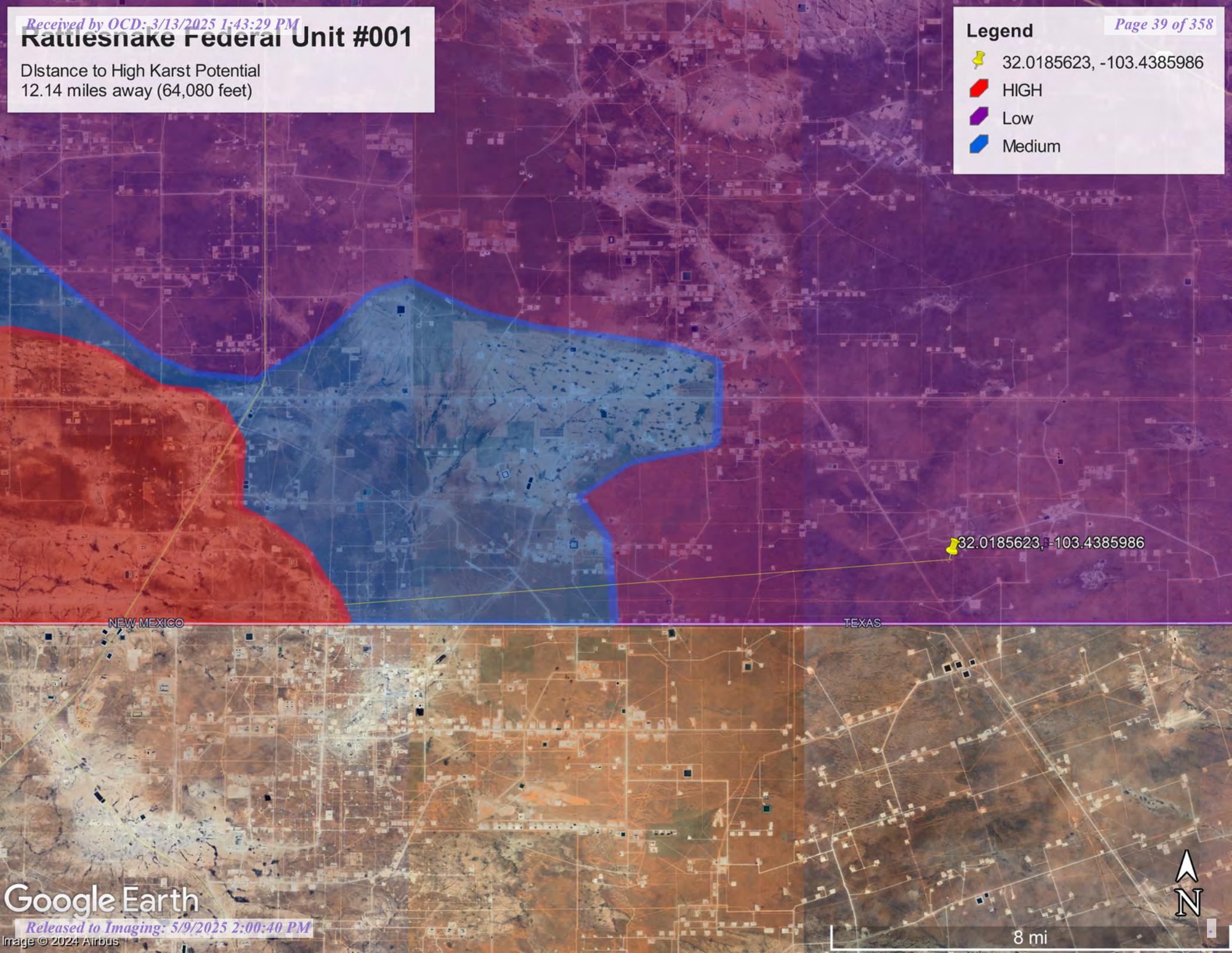
EMNRD MMD GIS Coordinator

Rattlesnake Federal Unit #001

Distance to High Karst Potential
12.14 miles away (64,080 feet)

Legend

-  32.0185623, -103.4385986
-  HIGH
-  Low
-  Medium



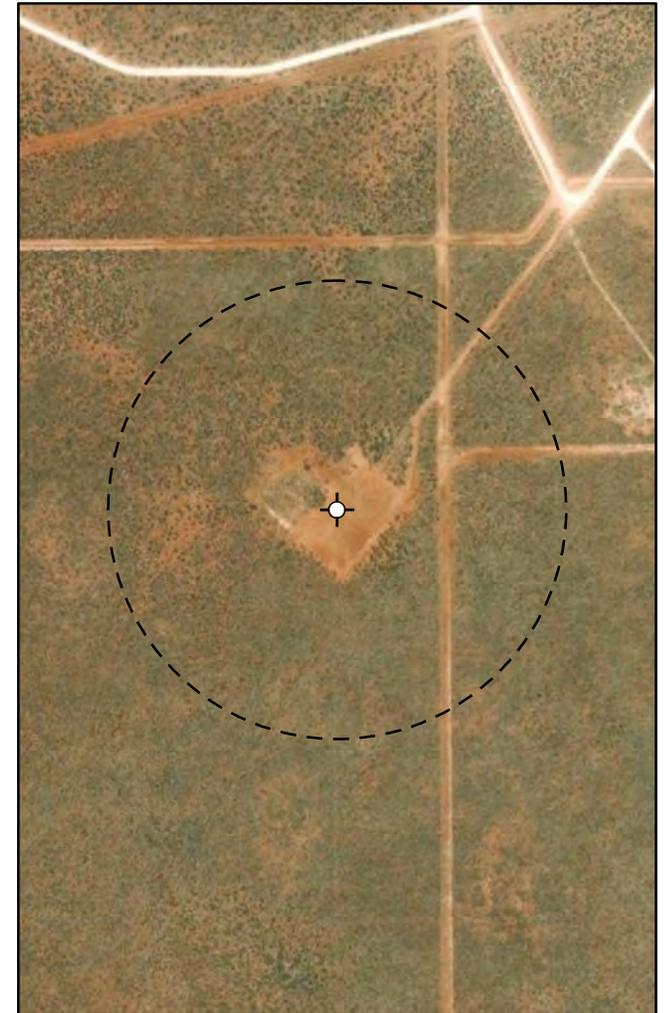
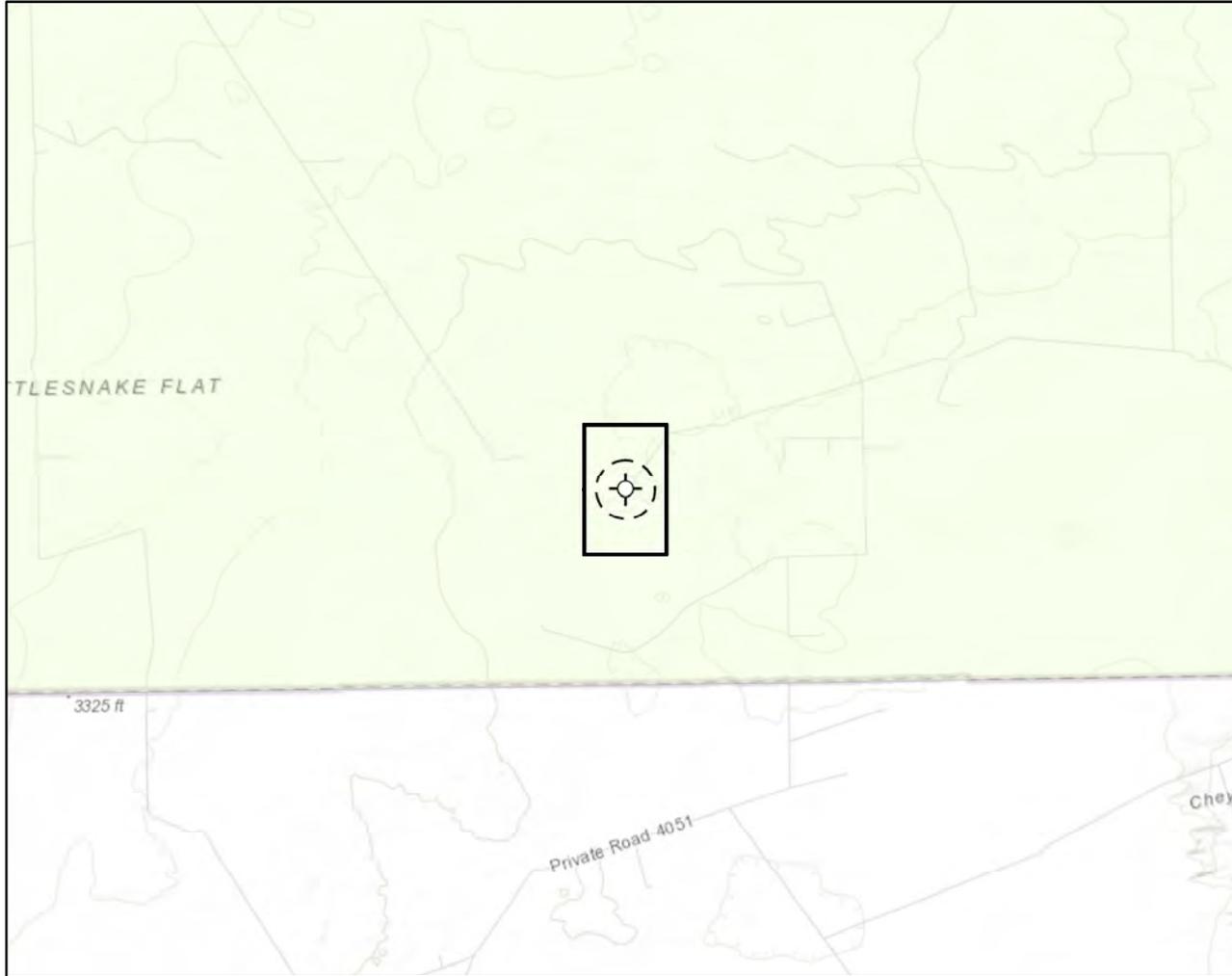
NEW MEXICO

TEXAS

32.0185623, -103.4385986



Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2023\23E-04815 - Rattlesnake Federal Unit #001\Figure X Karst Potential Map (23E-04815).mxd



Karst Potential

- Critical
- High
- Medium
- Low

- Site Location
- Buffer 1000ft

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft



Map Center:
Lat/Long: 32.018562, -103.438599

NAD 1983 UTM Zone 13N
Date: Aug 23/23



Karst Potential Map
Rattlesnake Federal Unit #001

FIGURE:

X



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 2022; Overview Map: ESRI World Topographic. Karst potential data sourced from Roswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

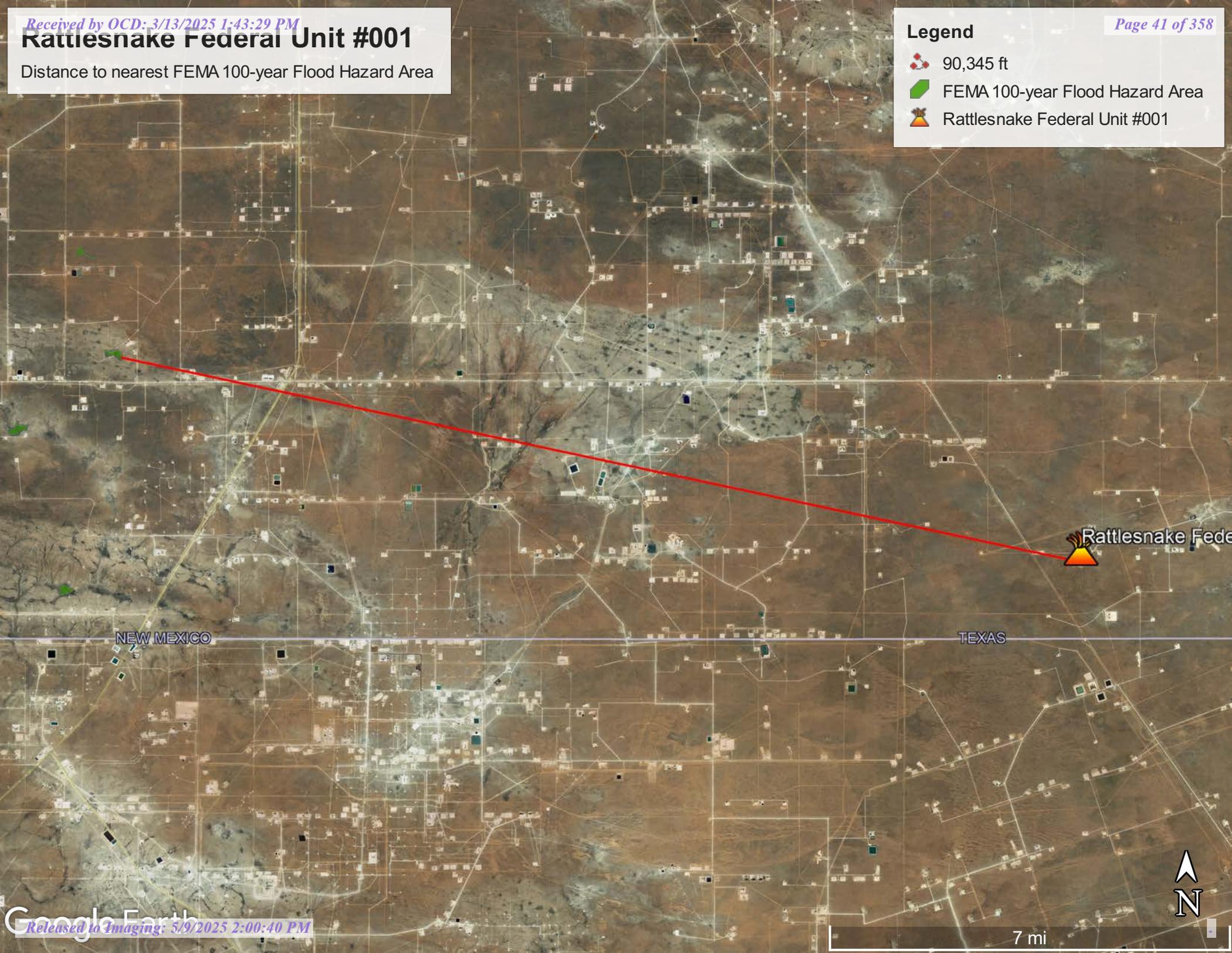
VERSATILITY. EXPERTISE.

Rattlesnake Federal Unit #001

Distance to nearest FEMA 100-year Flood Hazard Area

Legend

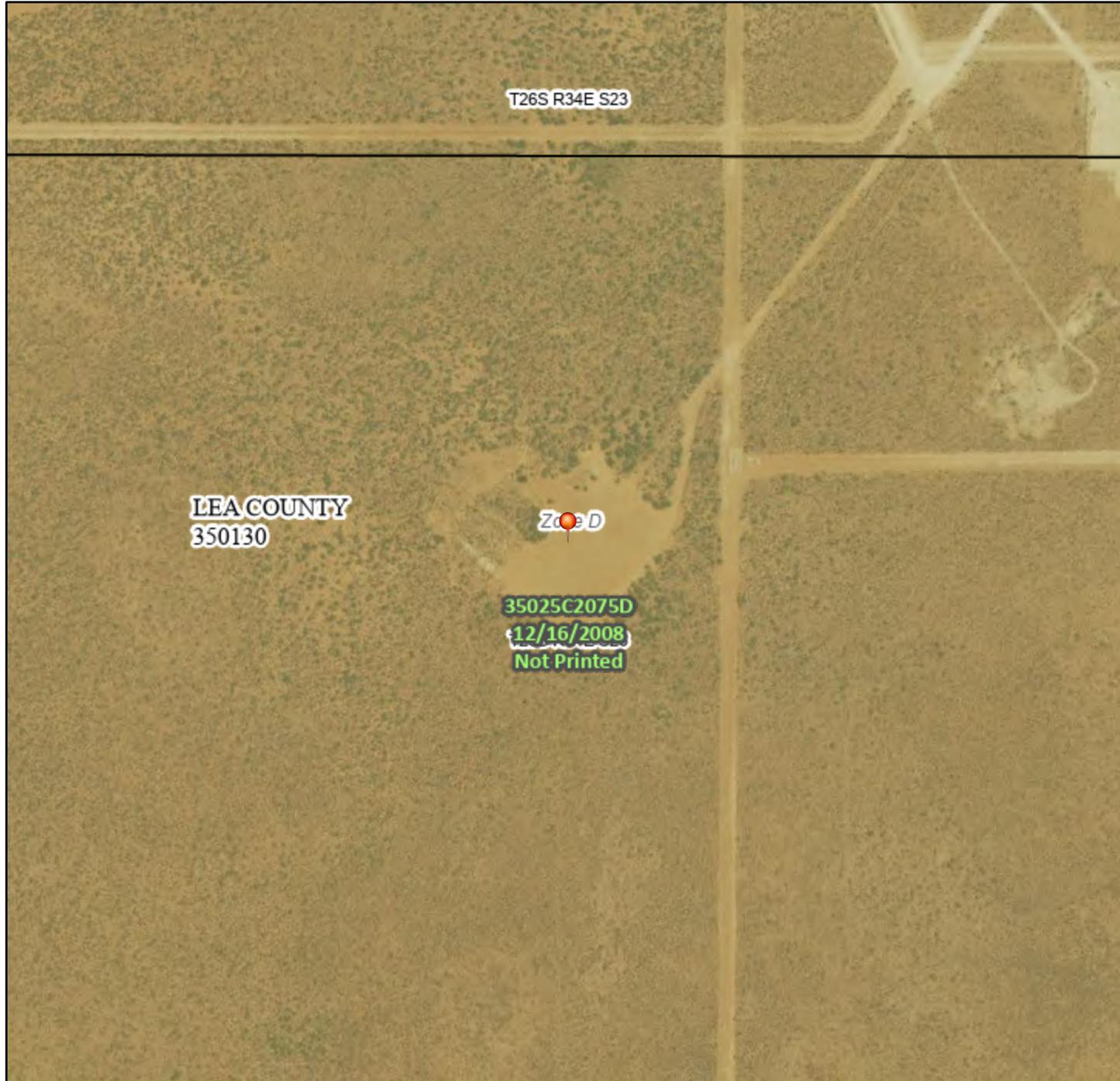
-  90,345 ft
-  FEMA 100-year Flood Hazard Area
-  Rattlesnake Federal Unit #001



National Flood Hazard Layer FIRMette



103°26'38"W 32°1'22"N



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



1:6,000

103°26'W 32°0'52"N

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/9/2023 at 7:03 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: basemap 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.



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

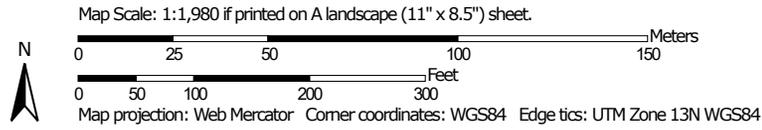


August 10, 2023

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



Custom Soil Resource Report

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 19, Sep 8, 2022

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

Date(s) aerial images were photographed: Mar 20, 2020—Mar 22, 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.

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BE	Berino-Cacique loamy fine sands association	10.0	69.0%
PU	Pyote and Maljamar fine sands	4.5	31.0%
Totals for Area of Interest		14.5	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,

Custom Soil Resource Report

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.

Custom Soil Resource Report

Lea County, New Mexico**BE—Berino-Cacique loamy fine sands association****Map Unit Setting**

National map unit symbol: dmpd
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 13 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

Berino and similar soils: 50 percent
Cacique and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino**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 over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 6 inches: loamy fine sand
Btk - 6 to 60 inches: sandy 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: 40 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 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Custom Soil Resource Report

Description of Cacique**Setting**

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 12 inches: loamy fine sand

Bt - 12 to 28 inches: sandy clay loam

Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 20 to 40 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

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 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7c

Hydrologic Soil Group: C

Ecological site: R070BD004NM - Sandy

Hydric soil rating: No

Minor Components**Maljamar**

Percent of map unit: 6 percent

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

Palomas

Percent of map unit: 4 percent

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Custom Soil Resource Report

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

Custom Soil Resource Report

Ecological site: R070BD003NM - 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: R070BD003NM - Loamy Sand

Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 10 percent

Ecological site: R070BC022NM - Sandhills

Hydric soil rating: No

Ecological site R070BD003NM Loamy Sand

Accessed: 05/19/2023

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

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

R070BD004NM	Sandy Sandy
R070BD005NM	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

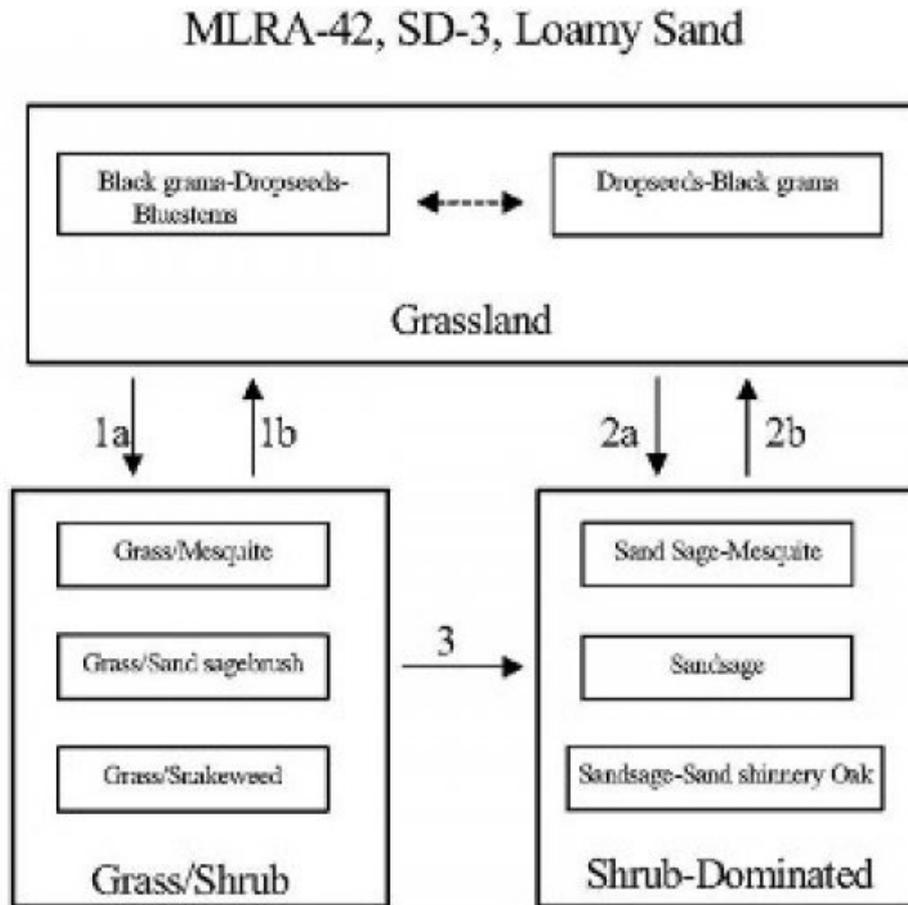
Overview

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.

**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 5. 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

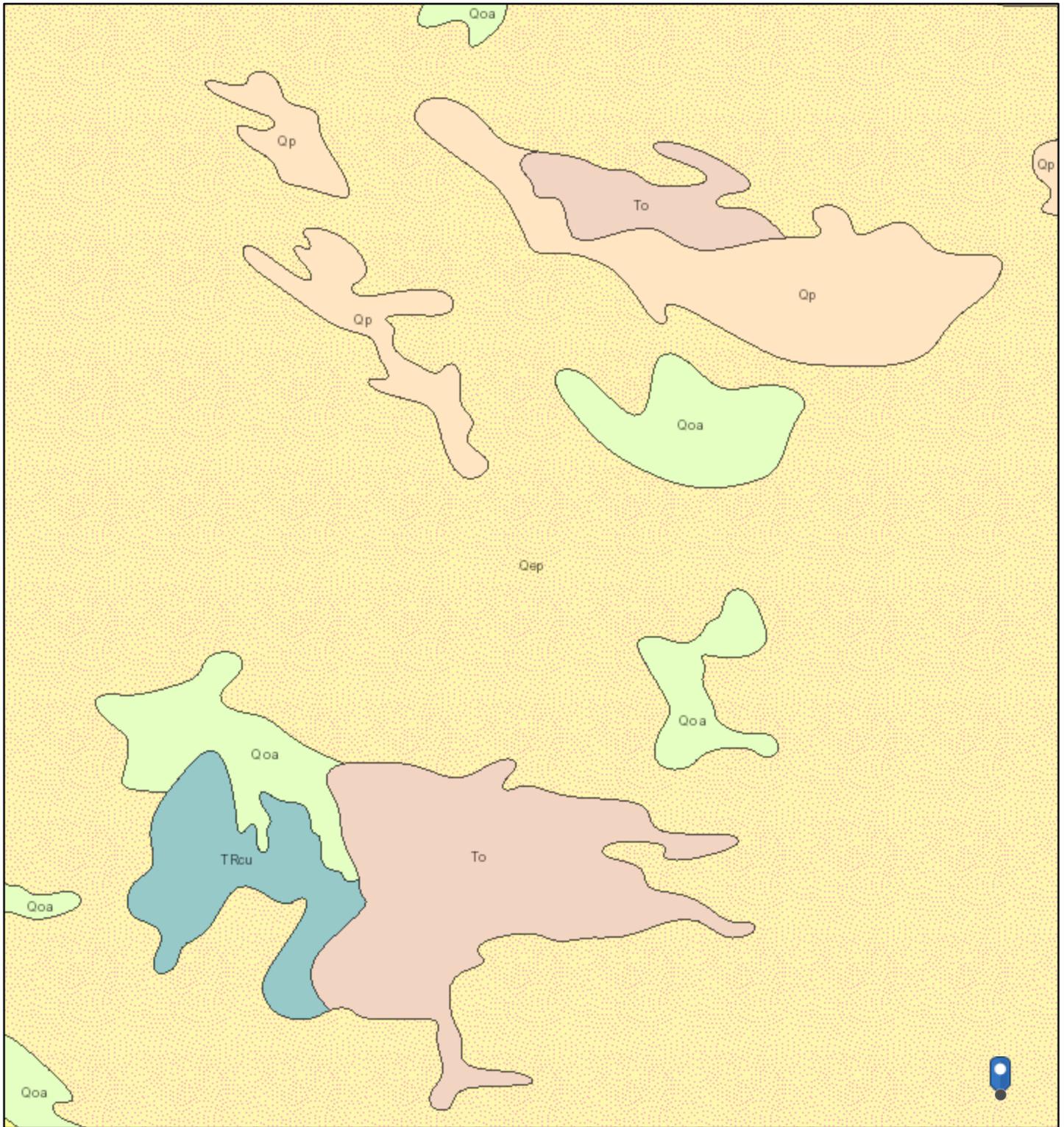
aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased 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/threawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threawn 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	<i>Schizachyrium scoparium</i>	61–123	–
2	Warm Season			37–61	
	sand bluestem	ANHA	<i>Andropogon hallii</i>	37–61	–
3	Warm Season			37–61	
	cane bluestem	BOBA3	<i>Bothriochloa barbinodis</i>	37–61	–
	silver bluestem	BOSA	<i>Bothriochloa saccharoides</i>	37–61	–
4	Warm Season			123–184	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	123–184	–
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	123–184	–
5	Warm Season			123–184	
	thin paspalum	PASE5	<i>Paspalum setaceum</i>	123–184	–
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	123–184	–
	fringed signalgrass	URCI	<i>Urochloa ciliatissima</i>	123–184	–
6	Warm Season			123–184	
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	123–184	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	123–184	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	123–184	–
7	Warm Season			61–123	
	hooded windmill grass	CHCU2	<i>Chloris cucullata</i>	61–123	–
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	61–123	–
9	Other Perennial Grasses			37–61	
	Grass, perennial	2GP	<i>Grass, perennial</i>	37–61	–
Shrub/Vine					
8	Warm Season			37–61	
	New Mexico feathergrass	HENE5	<i>Hesperostipa neomexicana</i>	37–61	–
	giant dropseed	SPGI	<i>Sporobolus giganteus</i>	37–61	–
10	Shrub			61–123	

Rattlesnake Federal Unit #001 Geology

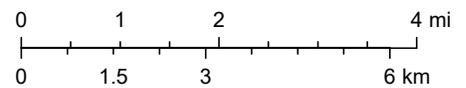


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Lithologic Units

- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perennial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)



Esri, NASA, NGA, USGS, NMBGMR, 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

APPENDIX C – Daily Field Reports



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	9/14/2023
Site Location Name:	Rattlesnake Federal Unit 1	Report Run Date:	9/14/2023 11:06 PM
Client Contact Name:	Dale Woodall	API #:	30-025-36928
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site 9/14/2023 8:30 AM

Departed Site 9/14/2023 2:30 PM

Field Notes

- 13:24** Completed safety paperwork and initial line locate upon arrival to site
- 13:24** Continued delineation efforts on site.
- 13:25** Took BH23-05 to 5' to obtain clean.
- 13:26** BH23-06 stepped out to 10.
BH23-07 stepped out to 11.

- Samples obtained at 0 and 2' depths.
*southwest portion of site where tank battery used to be.
- 13:27** Moved to north side of site where we'll head used to be.
Obtained BH23-12, 13, and 14 all at 0, 2 and 4' depths.

Next Steps & Recommendations

- 1** Continue delineation



Daily Site Visit Report

Site Photos

Viewing Direction: South



BH23-05

Viewing Direction: South



BH23-10

Viewing Direction: South



BH23-11

Viewing Direction: East



BH23-12

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Austin Harris

Signature:

A handwritten signature in black ink, appearing to be 'AH' or similar initials, written over a horizontal line.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	10/16/2023
Site Location Name:	Rattlesnake Federal Unit 1	Report Run Date:	10/16/2023 11:31 PM
Client Contact Name:	Jim Raley	API #:	30-025-36928
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	10/16/2023 8:00 AM
Departed Site	10/16/2023 2:15 PM

Field Notes

- 12:42** Completed safety paperwork and initial line locate upon arrival to site
- 12:42** On site to continue/complete delineation on release area on north side of pad where former wellhead used to be
- 12:44** Obtained:
 - BH23-21 step out to north
 - BH23-22 step out to west
 - BH23-23 step out to South
 - BH23-24 step out to east
 - All at 0 and 2' depths for horizontal delineation purposes.
- 12:44** Obtained:
 - BH23-25 in center at 0, 2, 4 and 5' depths for vertical delineation purposes.

Next Steps & Recommendations

- 1** Send samples to lab.
- Draft work plan.

Daily Site Visit Report





Daily Site Visit Report

Site Photos

Viewing Direction: South



BH23-21

Viewing Direction: East



BH23-22

Viewing Direction: North



BH23-23

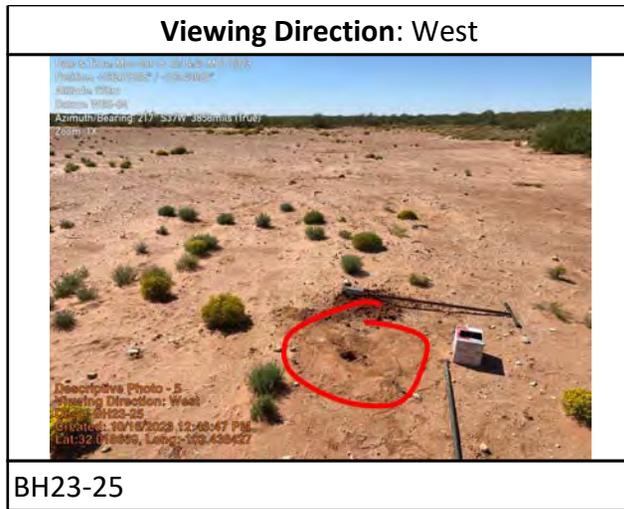
Viewing Direction: West



BH23-24



Daily Site Visit Report



Daily Site Visit Report



Daily Site Visit Signature

Inspector: Austin Harris

Signature:

A handwritten signature in black ink, appearing to be 'AH' with a large loop.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	12/2/2024
Site Location Name:	Rattlesnake Federal Unit 1	Report Run Date:	12/11/2024 6:57 PM
Client Contact Name:	Dale Woodall	API #:	30-025-36928
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	12/2/2024 9:30 AM
Departed Site	12/2/2024 3:00 PM

Field Notes

- 13:51** Excavation continued
- 13:52** Samples were collected and field screened to verify results were below criteria
- 13:52** All excavation was completed besides north wall
- 13:53** Bellydumps hauled several loads of contaminated material to R360

Next Steps & Recommendations

- 1** Complete excavation
- 2** Field screen all samples
- 3** Schedule confirmation sampling event



Daily Site Visit Report

Site Photos

Viewing Direction: East



BS24-04 and BS 24-05 @ 1'

Viewing Direction: West



BS24-06 and BS24-07 @ 1'

Viewing Direction: Northwest



BS24-08 @ 1'

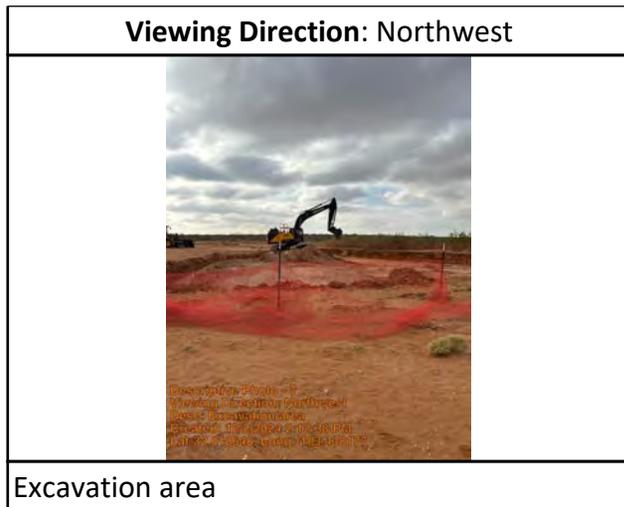
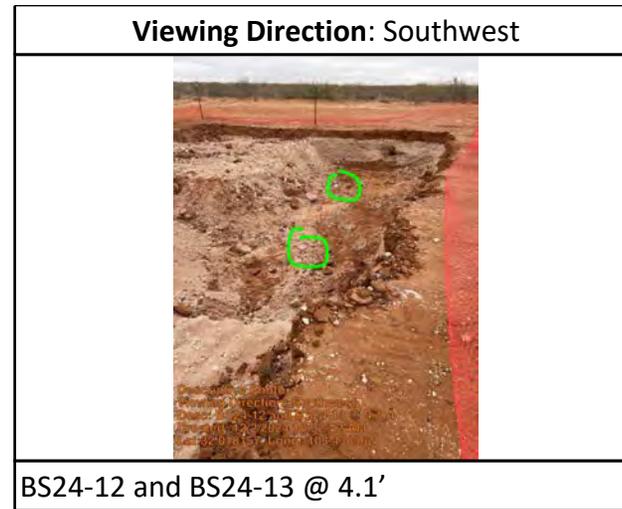
Viewing Direction: East



BS24-09 and BS24-10 @ 1'



Daily Site Visit Report





Daily Site Visit Report

Viewing Direction: Southeast	
	
Contaminated material on plastic	

Viewing Direction: East	
	
Completed excavation area	

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Riley Arnold

Signature:


Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	12/5/2024
Site Location Name:	Rattlesnake Federal Unit 1	Report Run Date:	12/10/2024 9:41 PM
Client Contact Name:	Dale Woodall	API #:	30-025-36928
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	12/5/2024 8:00 AM
Departed Site	12/5/2024 3:30 PM

Field Notes

- 13:41** Confirmation samples
- 13:42** Samples were field screened to assure site criteria was met

Next Steps & Recommendations

- 1 Complete field screening
- 2 Jar and coc samples for lab



Daily Site Visit Report

Site Photos

Viewing Direction: West



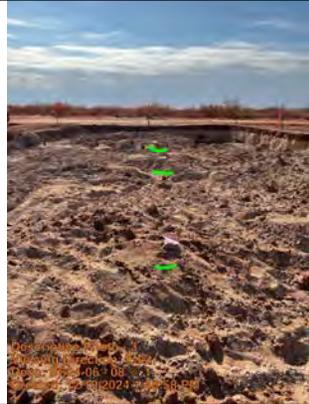
BS24-1-3 @ 1'

Viewing Direction: West



BS24-04- and 5 @ 1'

Viewing Direction: West



BS24-06 - 08 @ 1'

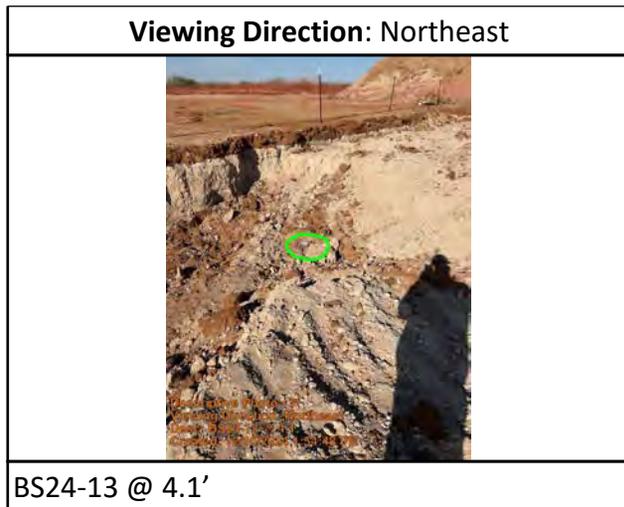
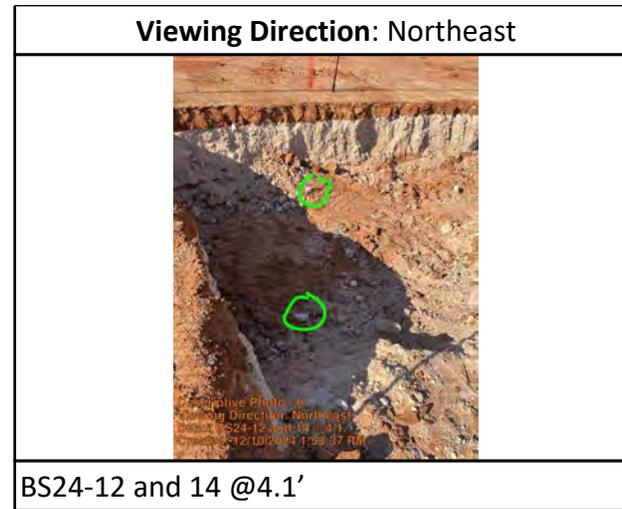
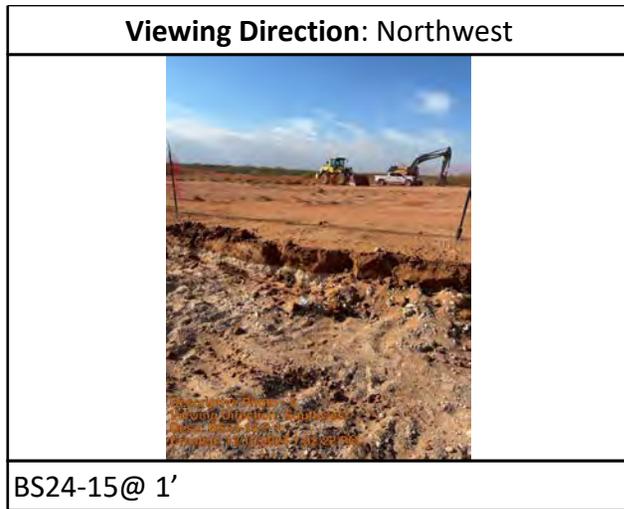
Viewing Direction: West



BS24-09 - 11 @ 1'

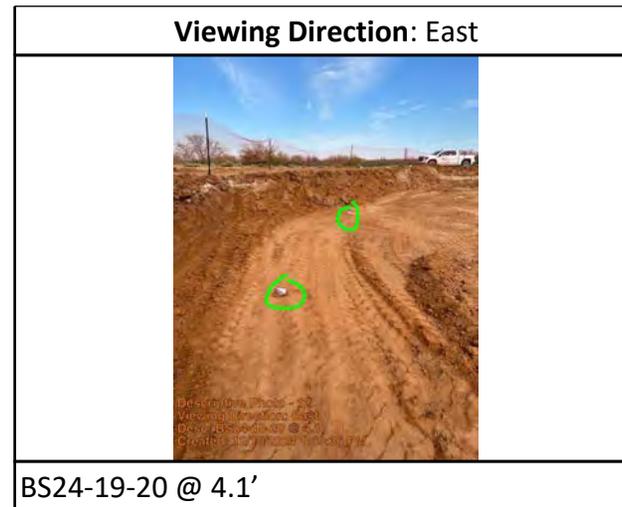
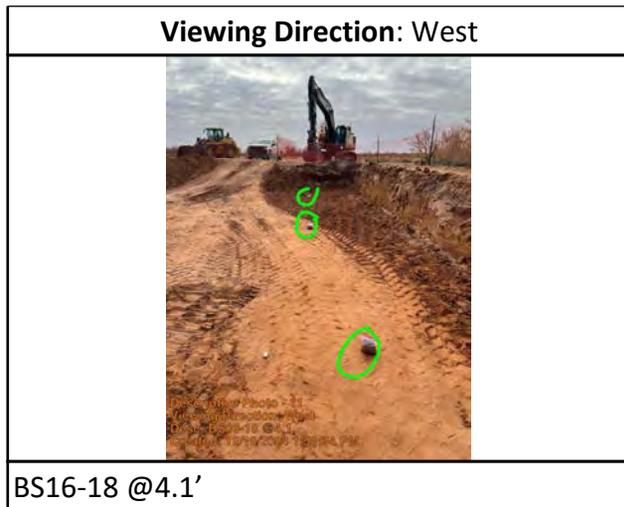
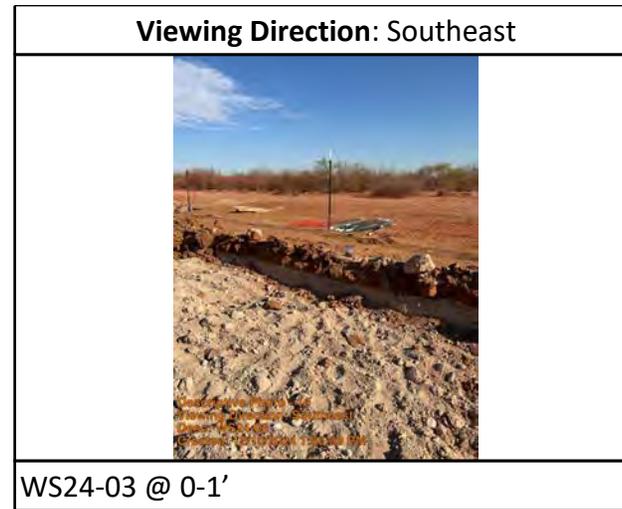


Daily Site Visit Report



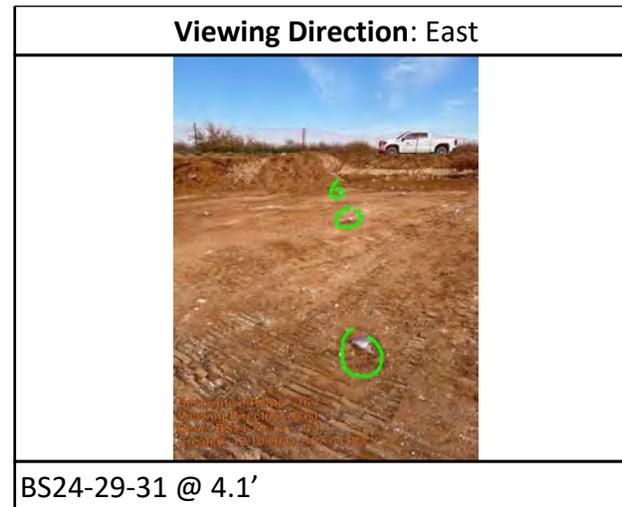
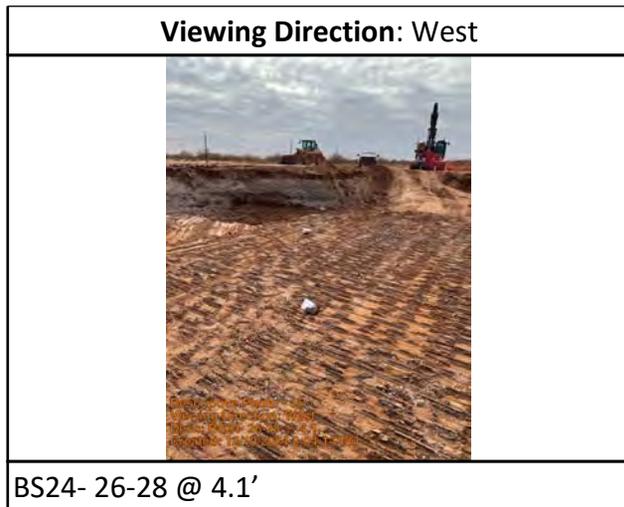
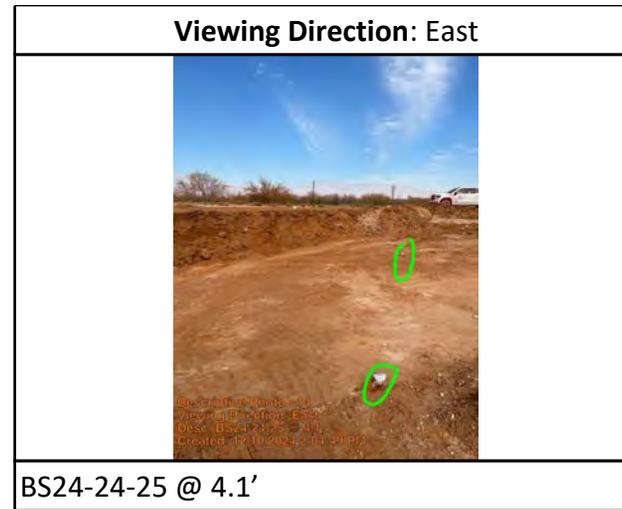
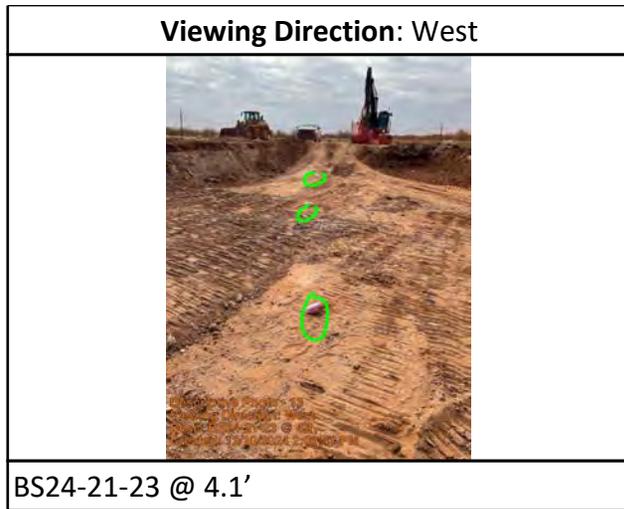


Daily Site Visit Report



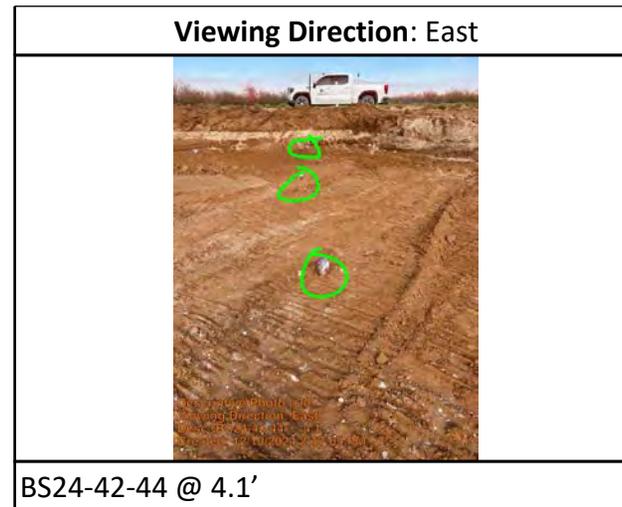
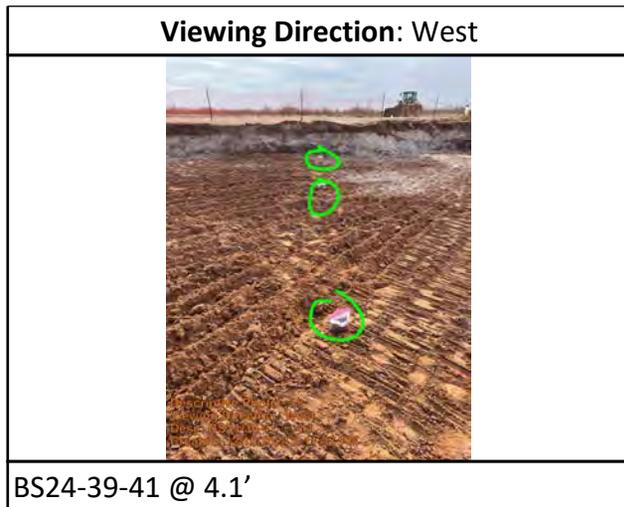
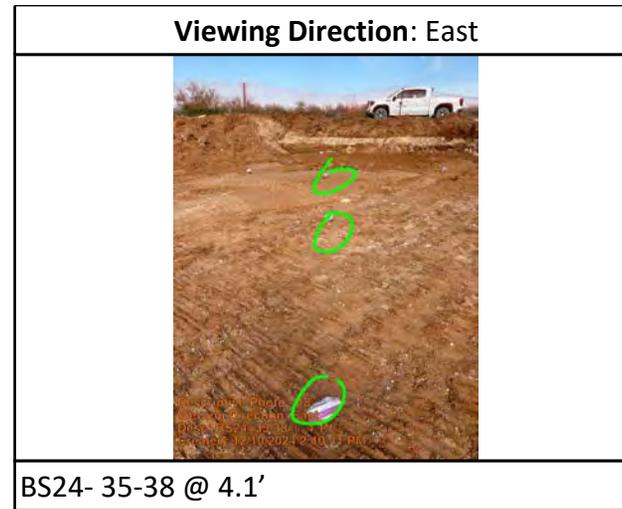
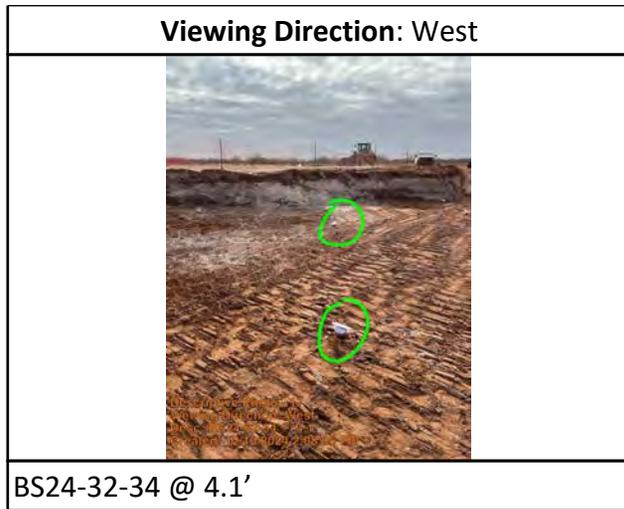


Daily Site Visit Report



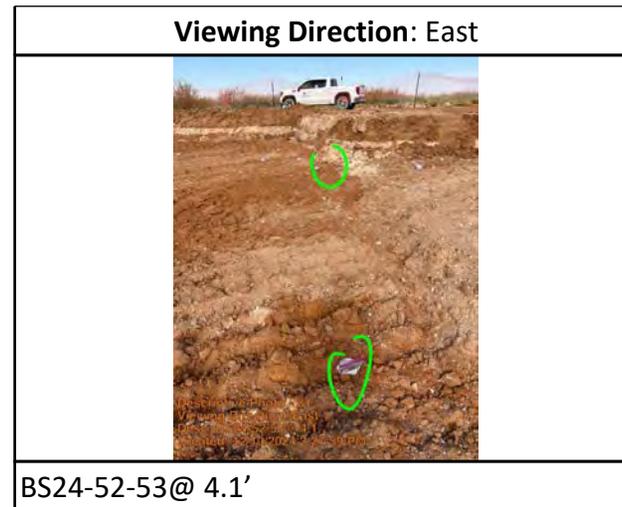
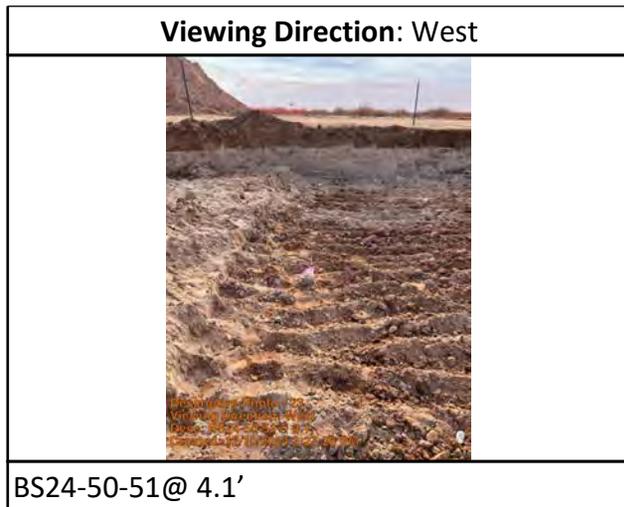
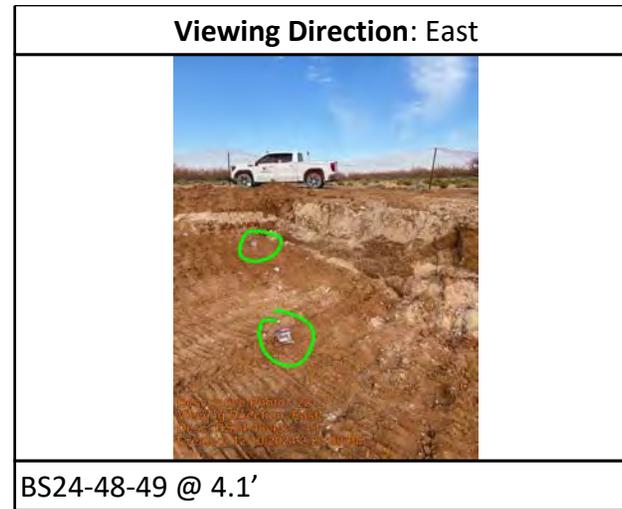
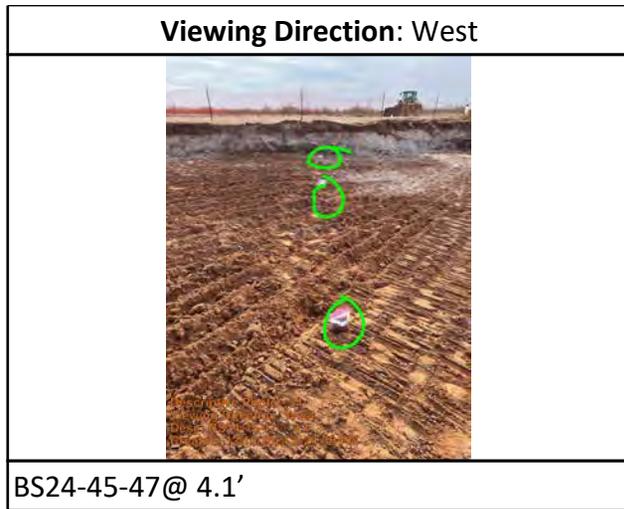


Daily Site Visit Report



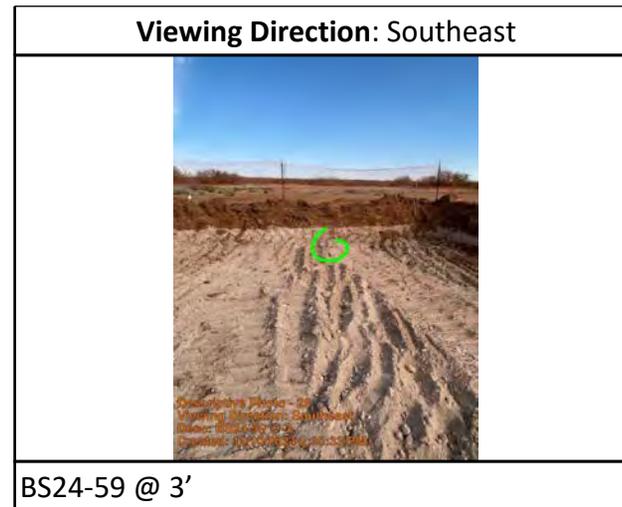
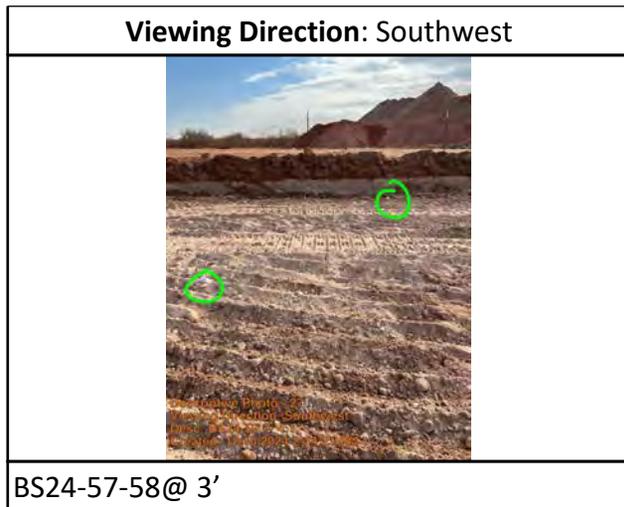
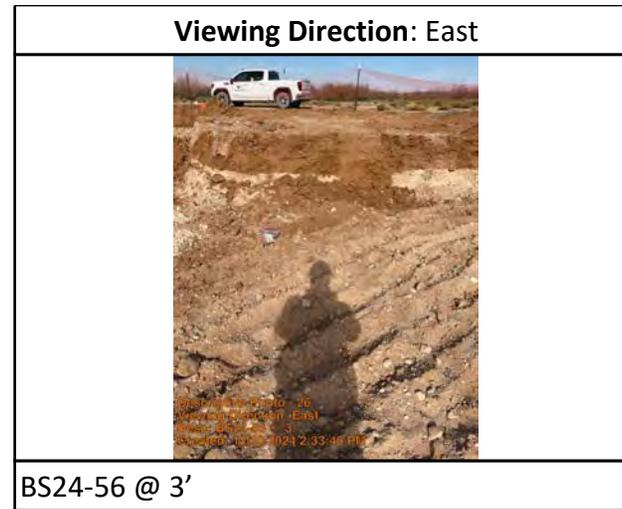
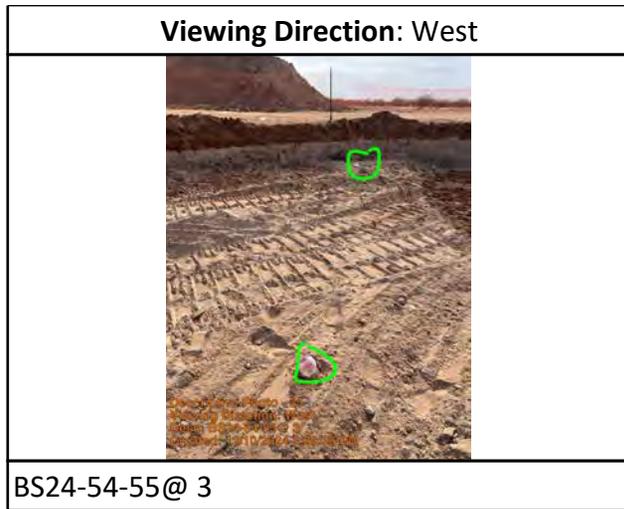


Daily Site Visit Report





Daily Site Visit Report



Daily Site Visit Report



Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

A handwritten signature in black ink, appearing to be 'Riley Arnold', written over a thin horizontal line. The word 'Signature' is printed in small text below the line on the left side.

APPENDIX D – 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

September 21, 2023

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

RE: Rattlesnake Federal Unit 001

OrderNo.: 2309637

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/13/2023 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 10:00:00 AM

Lab ID: 2309637-001

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	9/14/2023 2:15:22 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	9/14/2023 2:15:22 PM
Surr: DNOP	121	69-147		%Rec	1	9/14/2023 2:15:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/15/2023 3:46:00 PM
Surr: BFB	99.3	15-244		%Rec	1	9/15/2023 3:46:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/15/2023 3:46:00 PM
Toluene	ND	0.049		mg/Kg	1	9/15/2023 3:46:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/15/2023 3:46:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/15/2023 3:46:00 PM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	9/15/2023 3:46:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	9/15/2023 11:49:42 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 10:10:00 AM

Lab ID: 2309637-002

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/14/2023 2:26:05 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/14/2023 2:26:05 PM
Surr: DNOP	110	69-147		%Rec	1	9/14/2023 2:26:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/15/2023 4:30:00 PM
Surr: BFB	98.3	15-244		%Rec	1	9/15/2023 4:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/15/2023 4:30:00 PM
Toluene	ND	0.048		mg/Kg	1	9/15/2023 4:30:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/15/2023 4:30:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/15/2023 4:30:00 PM
Surr: 4-Bromofluorobenzene	88.1	39.1-146		%Rec	1	9/15/2023 4:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	9/16/2023 12:02:07 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 4.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 10:20:00 AM

Lab ID: 2309637-003

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/14/2023 2:36:48 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/14/2023 2:36:48 PM
Surr: DNOP	132	69-147		%Rec	1	9/14/2023 2:36:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/15/2023 4:51:00 PM
Surr: BFB	102	15-244		%Rec	1	9/15/2023 4:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/15/2023 4:51:00 PM
Toluene	ND	0.049		mg/Kg	1	9/15/2023 4:51:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/15/2023 4:51:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/15/2023 4:51:00 PM
Surr: 4-Bromofluorobenzene	87.2	39.1-146		%Rec	1	9/15/2023 4:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	71	60		mg/Kg	20	9/16/2023 12:39:19 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 10:30:00 AM

Lab ID: 2309637-004

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	9/15/2023 4:02:28 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	9/15/2023 4:02:28 PM
Surr: DNOP	114	69-147		%Rec	1	9/15/2023 4:02:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/16/2023 12:42:24 AM
Surr: BFB	96.6	15-244		%Rec	1	9/16/2023 12:42:24 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	9/16/2023 12:42:24 AM
Toluene	ND	0.047		mg/Kg	1	9/16/2023 12:42:24 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/16/2023 12:42:24 AM
Xylenes, Total	ND	0.094		mg/Kg	1	9/16/2023 12:42:24 AM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/16/2023 12:42:24 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	9/16/2023 12:51:43 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 10:40:00 AM

Lab ID: 2309637-005

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/14/2023 2:47:31 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/14/2023 2:47:31 PM
Surr: DNOP	93.1	69-147		%Rec	1	9/14/2023 2:47:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/15/2023 5:13:00 PM
Surr: BFB	94.5	15-244		%Rec	1	9/15/2023 5:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/15/2023 5:13:00 PM
Toluene	ND	0.049		mg/Kg	1	9/15/2023 5:13:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/15/2023 5:13:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/15/2023 5:13:00 PM
Surr: 4-Bromofluorobenzene	86.9	39.1-146		%Rec	1	9/15/2023 5:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	9/16/2023 1:04:08 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 10:50:00 AM

Lab ID: 2309637-006

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/14/2023 2:58:25 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/14/2023 2:58:25 PM
Surr: DNOP	125	69-147		%Rec	1	9/14/2023 2:58:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/15/2023 5:35:00 PM
Surr: BFB	96.9	15-244		%Rec	1	9/15/2023 5:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/15/2023 5:35:00 PM
Toluene	ND	0.048		mg/Kg	1	9/15/2023 5:35:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/15/2023 5:35:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/15/2023 5:35:00 PM
Surr: 4-Bromofluorobenzene	87.0	39.1-146		%Rec	1	9/15/2023 5:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	1400	60		mg/Kg	20	9/16/2023 1:16:33 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 2.0

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 11:00:00 AM

Lab ID: 2309637-007

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/15/2023 4:13:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/15/2023 4:13:09 PM
Surr: DNOP	118	69-147		%Rec	1	9/15/2023 4:13:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/15/2023 3:18:59 PM
Surr: BFB	97.8	15-244		%Rec	1	9/15/2023 3:18:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	9/15/2023 3:18:59 PM
Toluene	ND	0.047		mg/Kg	1	9/15/2023 3:18:59 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/15/2023 3:18:59 PM
Xylenes, Total	ND	0.093		mg/Kg	1	9/15/2023 3:18:59 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	9/15/2023 3:18:59 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	9/16/2023 1:28:58 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309637**

Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 4.0

Project: Rattlesnake Federal Unit 001

Collection Date: 9/11/2023 11:10:00 AM

Lab ID: 2309637-008

Matrix: SOIL

Received Date: 9/13/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/15/2023 4:23:59 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/15/2023 4:23:59 PM
Surr: DNOP	100	69-147		%Rec	1	9/15/2023 4:23:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/15/2023 4:29:16 PM
Surr: BFB	96.6	15-244		%Rec	1	9/15/2023 4:29:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/15/2023 4:29:16 PM
Toluene	ND	0.049		mg/Kg	1	9/15/2023 4:29:16 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/15/2023 4:29:16 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/15/2023 4:29:16 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/15/2023 4:29:16 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	9/18/2023 12:04:06 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309637

21-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: MB-77551	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77551	RunNo: 99735								
Prep Date: 9/15/2023	Analysis Date: 9/15/2023	SeqNo: 3645363	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77551	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77551	RunNo: 99735								
Prep Date: 9/15/2023	Analysis Date: 9/15/2023	SeqNo: 3645364	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110			

Sample ID: MB-77567	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77567	RunNo: 99788								
Prep Date: 9/18/2023	Analysis Date: 9/18/2023	SeqNo: 3647767	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77567	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77567	RunNo: 99788								
Prep Date: 9/18/2023	Analysis Date: 9/18/2023	SeqNo: 3647769	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309637

21-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: LCS-77491	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 77491		RunNo: 99723							
Prep Date: 9/13/2023	Analysis Date: 9/14/2023		SeqNo: 3644695		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	10	50.00	0	131	61.9	130			S
Surr: DNOP	6.7		5.000		133	69	147			

Sample ID: MB-77491	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 77491		RunNo: 99723							
Prep Date: 9/13/2023	Analysis Date: 9/14/2023		SeqNo: 3644696		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	14		10.00		140	69	147			

Sample ID: LCS-77525	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 77525		RunNo: 99724							
Prep Date: 9/14/2023	Analysis Date: 9/15/2023		SeqNo: 3644757		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	61.9	130			
Surr: DNOP	5.4		5.000		109	69	147			

Sample ID: MB-77525	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 77525		RunNo: 99724							
Prep Date: 9/14/2023	Analysis Date: 9/15/2023		SeqNo: 3644758		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	11		10.00		115	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309637

21-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-77482	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 77482	RunNo: 99696								
Prep Date: 9/13/2023	Analysis Date: 9/14/2023	SeqNo: 3643762	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.0	70	130			
Surr: BFB	2200		1000		221	15	244			

Sample ID: mb-77482	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 77482	RunNo: 99696								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3643763	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	970		1000		97.3	15	244			

Sample ID: ics-77494	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645788	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	70	130			
Surr: BFB	2100		1000		208	15	244			

Sample ID: mb-77494	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645790	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	990		1000		98.7	15	244			

Sample ID: 2309637-007ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-03 2.0	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645800	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.6	23.19	0	97.1	70	130			
Surr: BFB	1900		927.6		210	15	244			

Sample ID: 2309637-007amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-03 2.0	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645801	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309637

21-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: 2309637-007amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-03 2.0	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645801 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.28	0	104	70	130	7.44	20	
Surr: BFB	2000		931.1		211	15	244	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309637

21-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-77482	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77482		RunNo: 99696							
Prep Date: 9/13/2023	Analysis Date: 9/15/2023		SeqNo: 3643842		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.9	70	130			
Toluene	0.89	0.050	1.000	0	89.3	70	130			
Ethylbenzene	0.92	0.050	1.000	0	91.8	70	130			
Xylenes, Total	2.8	0.10	3.000	0	92.3	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.4	39.1	146			

Sample ID: mb-77482	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77482		RunNo: 99696							
Prep Date: 9/13/2023	Analysis Date: 9/15/2023		SeqNo: 3643843		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		87.3	39.1	146			

Sample ID: LCS-77494	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77494		RunNo: 99729							
Prep Date: 9/13/2023	Analysis Date: 9/15/2023		SeqNo: 3645869		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.3	70	130			
Toluene	0.99	0.050	1.000	0	99.2	70	130			
Ethylbenzene	0.99	0.050	1.000	0	99.1	70	130			
Xylenes, Total	3.0	0.10	3.000	0	99.4	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	39.1	146			

Sample ID: mb-77494	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77494		RunNo: 99729							
Prep Date: 9/13/2023	Analysis Date: 9/15/2023		SeqNo: 3645871		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	39.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309637

21-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: 2309637-008ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-03 4.0	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645876	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9833	0	108	70	130			
Toluene	1.1	0.049	0.9833	0	109	70	130			
Ethylbenzene	1.1	0.049	0.9833	0	109	70	130			
Xylenes, Total	3.2	0.098	2.950	0	109	70	130			
Surr: 4-Bromofluorobenzene	1.1		0.9833		108	39.1	146			

Sample ID: 2309637-008amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-03 4.0	Batch ID: 77494	RunNo: 99729								
Prep Date: 9/13/2023	Analysis Date: 9/15/2023	SeqNo: 3645877	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9891	0	109	70	130	0.878	20	
Toluene	1.1	0.049	0.9891	0	110	70	130	1.31	20	
Ethylbenzene	1.1	0.049	0.9891	0	109	70	130	0.866	20	
Xylenes, Total	3.3	0.099	2.967	0	110	70	130	0.911	20	
Surr: 4-Bromofluorobenzene	1.1		0.9891		109	39.1	146	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2309637 RcptNo: 1

Received By: Tracy Casarrubias 9/13/2023 7:45:00 AM

Completed By: Tracy Casarrubias 9/13/2023 8:26:27 AM

Reviewed By: [Signature] 9-13-23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: yua 9/13/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC - TMC 9/13/23

16. Additional remarks: Client did not relinquish chain of custody

17. Cooler Information

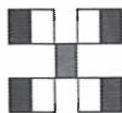
Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 19.0, Good, Yes, Yogi

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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



Chain-of-Custody Record

Client: Devon

Project Name: Direct Bill

Mailing Address:

Project #: 23E-04815

Phone #:

Email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Project Manager: Kent Stallings

Sampler: AHT

On Ice: Yes No 4001

of Coolers: 1

Cooler Temp (including CF): 18.9 to 19.0 (°C)

Container Type and # 402 Preservative Type ICE HEAL No. 23091637

Date 1000 Matrix Soil Sample Name BH23-01 0.0

1010 BH23-01 2.0

1020 BH23-01 4.0

1030 BH23-02 0.0

1040 BH23-02 2.0

1050 BH23-03 0.0

1100 BH23-03 2.0

1110 BH23-03 4.0

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, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Remarks: CC: Kent Stallings@vertex.ca
aharris@vertex.ca

Received by: [Signature] Date: 9/12/13 Time: 1000

Relinquished by: [Signature] Date: 9/13/13 Time: 7:45

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 noted 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

September 25, 2023

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

RE: Rattlesnake Fed Unit 001

OrderNo.: 2309763

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 18 sample(s) on 9/14/2023 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 0'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 9:00:00 AM

Lab ID: 2309763-001

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/19/2023 10:28:38 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/19/2023 10:28:38 PM
Surr: DNOP	116	69-147		%Rec	1	9/19/2023 10:28:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/19/2023 3:11:11 PM
Surr: BFB	98.7	15-244		%Rec	1	9/19/2023 3:11:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/19/2023 3:11:11 PM
Toluene	ND	0.049		mg/Kg	1	9/19/2023 3:11:11 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/19/2023 3:11:11 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/19/2023 3:11:11 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/19/2023 3:11:11 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	9/20/2023 7:55:45 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 2'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 9:10:00 AM

Lab ID: 2309763-002

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/19/2023 10:39:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/19/2023 10:39:37 PM
Surr: DNOP	105	69-147		%Rec	1	9/19/2023 10:39:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/19/2023 3:34:35 PM
Surr: BFB	96.3	15-244		%Rec	1	9/19/2023 3:34:35 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 3:34:35 PM
Toluene	ND	0.049		mg/Kg	1	9/19/2023 3:34:35 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/19/2023 3:34:35 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/19/2023 3:34:35 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/19/2023 3:34:35 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	100	61		mg/Kg	20	9/20/2023 9:22:10 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 4'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 9:20:00 AM

Lab ID: 2309763-003

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/19/2023 10:50:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/19/2023 10:50:36 PM
Surr: DNOP	106	69-147		%Rec	1	9/19/2023 10:50:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 3:58:15 PM
Surr: BFB	96.6	15-244		%Rec	1	9/19/2023 3:58:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 3:58:15 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 3:58:15 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 3:58:15 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/19/2023 3:58:15 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/19/2023 3:58:15 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	450	60		mg/Kg	20	9/20/2023 9:34:30 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 0'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 9:30:00 AM

Lab ID: 2309763-004

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/19/2023 11:01:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/19/2023 11:01:33 PM
Surr: DNOP	110	69-147		%Rec	1	9/19/2023 11:01:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 4:21:41 PM
Surr: BFB	95.5	15-244		%Rec	1	9/19/2023 4:21:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 4:21:41 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 4:21:41 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 4:21:41 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/19/2023 4:21:41 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/19/2023 4:21:41 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	230	59		mg/Kg	20	9/20/2023 9:46:50 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 2'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 9:40:00 AM

Lab ID: 2309763-005

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/19/2023 11:12:30 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/19/2023 11:12:30 PM
Surr: DNOP	122	69-147		%Rec	1	9/19/2023 11:12:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 5:08:37 PM
Surr: BFB	93.7	15-244		%Rec	1	9/19/2023 5:08:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 5:08:37 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 5:08:37 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 5:08:37 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/19/2023 5:08:37 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/19/2023 5:08:37 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	600	59		mg/Kg	20	9/20/2023 9:59:10 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 4'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 9:50:00 AM

Lab ID: 2309763-006

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/19/2023 11:23:26 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/19/2023 11:23:26 PM
Surr: DNOP	106	69-147		%Rec	1	9/19/2023 11:23:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/19/2023 5:32:01 PM
Surr: BFB	95.1	15-244		%Rec	1	9/19/2023 5:32:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 5:32:01 PM
Toluene	ND	0.049		mg/Kg	1	9/19/2023 5:32:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/19/2023 5:32:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/19/2023 5:32:01 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/19/2023 5:32:01 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1600	60		mg/Kg	20	9/20/2023 10:11:32 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 0'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 10:00:00 AM

Lab ID: 2309763-007

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/19/2023 11:34:20 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/19/2023 11:34:20 PM
Surr: DNOP	116	69-147		%Rec	1	9/19/2023 11:34:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/19/2023 5:55:24 PM
Surr: BFB	96.6	15-244		%Rec	1	9/19/2023 5:55:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/19/2023 5:55:24 PM
Toluene	ND	0.050		mg/Kg	1	9/19/2023 5:55:24 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/19/2023 5:55:24 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/19/2023 5:55:24 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/19/2023 5:55:24 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	680	60		mg/Kg	20	9/20/2023 10:23:52 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 2'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 10:10:00 AM

Lab ID: 2309763-008

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/19/2023 11:45:15 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/19/2023 11:45:15 PM
Surr: DNOP	111	69-147		%Rec	1	9/19/2023 11:45:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 6:18:49 PM
Surr: BFB	93.3	15-244		%Rec	1	9/19/2023 6:18:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 6:18:49 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 6:18:49 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 6:18:49 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/19/2023 6:18:49 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/19/2023 6:18:49 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	180	60		mg/Kg	20	9/20/2023 11:00:55 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 4'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 10:20:00 AM

Lab ID: 2309763-009

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	14	9.8		mg/Kg	1	9/19/2023 11:56:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/19/2023 11:56:10 PM
Surr: DNOP	130	69-147		%Rec	1	9/19/2023 11:56:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 6:42:25 PM
Surr: BFB	98.0	15-244		%Rec	1	9/19/2023 6:42:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 6:42:25 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 6:42:25 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 6:42:25 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/19/2023 6:42:25 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/19/2023 6:42:25 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	150	60		mg/Kg	20	9/20/2023 11:13:15 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 0'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 10:30:00 AM

Lab ID: 2309763-010

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/20/2023 12:07:01 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/20/2023 12:07:01 AM
Surr: DNOP	102	69-147		%Rec	1	9/20/2023 12:07:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 7:05:45 PM
Surr: BFB	97.7	15-244		%Rec	1	9/19/2023 7:05:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 7:05:45 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 7:05:45 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 7:05:45 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/19/2023 7:05:45 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/19/2023 7:05:45 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1100	59		mg/Kg	20	9/20/2023 11:25:36 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 2'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 10:40:00 AM

Lab ID: 2309763-011

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	12	9.4		mg/Kg	1	9/20/2023 12:17:54 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 12:17:54 AM
Surr: DNOP	118	69-147		%Rec	1	9/20/2023 12:17:54 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 7:29:08 PM
Surr: BFB	96.9	15-244		%Rec	1	9/19/2023 7:29:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 7:29:08 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 7:29:08 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 7:29:08 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/19/2023 7:29:08 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/19/2023 7:29:08 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	370	60		mg/Kg	20	9/20/2023 11:37:56 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 4'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 10:50:00 AM

Lab ID: 2309763-012

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/20/2023 12:28:49 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/20/2023 12:28:49 AM
Surr: DNOP	107	69-147		%Rec	1	9/20/2023 12:28:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 7:52:47 PM
Surr: BFB	96.5	15-244		%Rec	1	9/19/2023 7:52:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 7:52:47 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 7:52:47 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 7:52:47 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/19/2023 7:52:47 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/19/2023 7:52:47 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	200	59		mg/Kg	20	9/20/2023 11:50:17 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 0'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 11:00:00 AM

Lab ID: 2309763-013

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/20/2023 12:39:43 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2023 12:39:43 AM
Surr: DNOP	96.6	69-147		%Rec	1	9/20/2023 12:39:43 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/19/2023 8:16:06 PM
Surr: BFB	99.7	15-244		%Rec	1	9/19/2023 8:16:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/19/2023 8:16:06 PM
Toluene	ND	0.047		mg/Kg	1	9/19/2023 8:16:06 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/19/2023 8:16:06 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/19/2023 8:16:06 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	9/19/2023 8:16:06 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	690	59		mg/Kg	20	9/21/2023 12:02:38 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 2'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 11:10:00 AM

Lab ID: 2309763-014

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	11	10		mg/Kg	1	9/20/2023 12:50:34 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2023 12:50:34 AM
Surr: DNOP	118	69-147		%Rec	1	9/20/2023 12:50:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/20/2023 12:29:47 PM
Surr: BFB	97.8	15-244		%Rec	1	9/20/2023 12:29:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/20/2023 12:29:47 PM
Toluene	ND	0.049		mg/Kg	1	9/20/2023 12:29:47 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/20/2023 12:29:47 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/20/2023 12:29:47 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	9/20/2023 12:29:47 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	190	60		mg/Kg	20	9/21/2023 12:14:58 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 4'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 11:20:00 AM

Lab ID: 2309763-015

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/20/2023 1:01:25 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2023 1:01:25 AM
Surr: DNOP	120	69-147		%Rec	1	9/20/2023 1:01:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/20/2023 12:53:07 PM
Surr: BFB	96.1	15-244		%Rec	1	9/20/2023 12:53:07 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/20/2023 12:53:07 PM
Toluene	ND	0.048		mg/Kg	1	9/20/2023 12:53:07 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/20/2023 12:53:07 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/20/2023 12:53:07 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/20/2023 12:53:07 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	130	61		mg/Kg	20	9/21/2023 12:27:18 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 0'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 11:30:00 AM

Lab ID: 2309763-016

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/20/2023 1:12:14 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 1:12:14 AM
Surr: DNOP	93.4	69-147		%Rec	1	9/20/2023 1:12:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/20/2023 1:16:25 PM
Surr: BFB	95.9	15-244		%Rec	1	9/20/2023 1:16:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/20/2023 1:16:25 PM
Toluene	ND	0.047		mg/Kg	1	9/20/2023 1:16:25 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/20/2023 1:16:25 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/20/2023 1:16:25 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/20/2023 1:16:25 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	170	61		mg/Kg	20	9/21/2023 12:39:39 AM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 2'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 11:40:00 AM

Lab ID: 2309763-017

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/20/2023 2:28:15 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 2:28:15 AM
Surr: DNOP	103	69-147		%Rec	1	9/20/2023 2:28:15 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/19/2023 4:12:00 PM
Surr: BFB	98.9	15-244		%Rec	1	9/19/2023 4:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/19/2023 4:12:00 PM
Toluene	ND	0.048		mg/Kg	1	9/19/2023 4:12:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/19/2023 4:12:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/19/2023 4:12:00 PM
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	9/19/2023 4:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	62	60		mg/Kg	20	9/21/2023 12:51:59 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309763**

Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 4'

Project: Rattlesnake Fed Unit 001

Collection Date: 9/12/2023 11:50:00 AM

Lab ID: 2309763-018

Matrix: SOIL

Received Date: 9/14/2023 7:40:00 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	9/20/2023 2:39:08 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 2:39:08 AM
Surr: DNOP	105	69-147		%Rec	1	9/20/2023 2:39:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/19/2023 4:33:00 PM
Surr: BFB	99.2	15-244		%Rec	1	9/19/2023 4:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/19/2023 4:33:00 PM
Toluene	ND	0.049		mg/Kg	1	9/19/2023 4:33:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/19/2023 4:33:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/19/2023 4:33:00 PM
Surr: 4-Bromofluorobenzene	88.1	39.1-146		%Rec	1	9/19/2023 4:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	9/21/2023 1:29:00 AM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309763

25-Sep-23

Client: Devon Energy
Project: Rattlesnake Fed Unit 001

Sample ID: MB-77654	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77654	RunNo: 99854								
Prep Date: 9/20/2023	Analysis Date: 9/20/2023	SeqNo: 3652019	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77654	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77654	RunNo: 99854								
Prep Date: 9/20/2023	Analysis Date: 9/20/2023	SeqNo: 3652020	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.2	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309763

25-Sep-23

Client: Devon Energy
Project: Rattlesnake Fed Unit 001

Sample ID: MB-77580	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77580	RunNo: 99810								
Prep Date: 9/19/2023	Analysis Date: 9/19/2023	SeqNo: 3648794	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	11		10.00		114	69	147			

Sample ID: LCS-77580	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77580	RunNo: 99810								
Prep Date: 9/19/2023	Analysis Date: 9/19/2023	SeqNo: 3648795	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	61.9	130			
Surr: DNOP	5.4		5.000		108	69	147			

Sample ID: MB-77579	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77579	RunNo: 99809								
Prep Date: 9/18/2023	Analysis Date: 9/19/2023	SeqNo: 3649079	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		118	69	147			

Sample ID: LCS-77579	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77579	RunNo: 99809								
Prep Date: 9/18/2023	Analysis Date: 9/19/2023	SeqNo: 3649081	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.2	61.9	130			
Surr: DNOP	5.5		5.000		110	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309763

25-Sep-23

Client: Devon Energy
Project: Rattlesnake Fed Unit 001

Sample ID: ics-77575	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77575		RunNo: 99813							
Prep Date: 9/18/2023	Analysis Date: 9/19/2023		SeqNo: 3648847		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	95.0	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: mb-77575	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77575		RunNo: 99813							
Prep Date: 9/18/2023	Analysis Date: 9/19/2023		SeqNo: 3648848		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	990		1000		99.1	15	244			

Sample ID: ics-77531	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77531		RunNo: 99796							
Prep Date: 9/14/2023	Analysis Date: 9/19/2023		SeqNo: 3649498		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.7	70	130			
Surr: BFB	2000		1000		196	15	244			

Sample ID: mb-77531	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77531		RunNo: 99796							
Prep Date: 9/14/2023	Analysis Date: 9/19/2023		SeqNo: 3649499		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		93.2	15	244			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309763

25-Sep-23

Client: Devon Energy
Project: Rattlesnake Fed Unit 001

Sample ID: ics-77575	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77575		RunNo: 99813							
Prep Date: 9/18/2023	Analysis Date: 9/19/2023		SeqNo: 3648857		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.7	70	130			
Toluene	0.90	0.050	1.000	0	90.4	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		88.9	39.1	146			

Sample ID: mb-77575	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77575		RunNo: 99813							
Prep Date: 9/18/2023	Analysis Date: 9/19/2023		SeqNo: 3648858		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	0.89		1.000		89.3	39.1	146			

Sample ID: LCS-77531	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77531		RunNo: 99796							
Prep Date: 9/14/2023	Analysis Date: 9/19/2023		SeqNo: 3649520		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	70	130			
Toluene	1.0	0.050	1.000	0	105	70	130			
Ethylbenzene	1.1	0.050	1.000	0	105	70	130			
Xylenes, Total	3.2	0.10	3.000	0	106	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	39.1	146			

Sample ID: mb-77531	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77531		RunNo: 99796							
Prep Date: 9/14/2023	Analysis Date: 9/19/2023		SeqNo: 3649521		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	39.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2309763 RcptNo: 1

Received By: Tracy Casarrubias 9/14/2023 7:40:00 AM

Completed By: Tracy Casarrubias 9/14/2023 9:13:18 AM

Reviewed By: [Signature] 9-14-23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: SCM 9/14/23

Special Handling (if applicable)

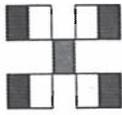
- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC- TMC 9/14/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.3, Good, Yes, Yogi, [], []



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Chain-of-Custody Record

Client: Devon Standard Rush 5 DAM
 Project Name: Rattle Snake Fed Unit #001

Project #: 23E-04815

Project Manager: Kerb Stallings

Sampler: AH
 On Ice: Yes No Y091
 # of Coolers: 1
 Cooler Temp (including CF): 1.3 - 0 = 1.3 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
9/12	0900	S011	BH23-04 0'			001
	0910		BH23-04 2'			002
	0920		BH23-04 4'			003
	0930		BH23-05 0'			004
	0940		BH23-05 2'			005
	0950		BH23-05 4'			006
	1000		BH23-06 0'			007
	1010		BH23-06 2'			008
	1020		BH23-06 4'			009
	1030		BH23-07 0'			010
	1040		BH23-07 2'			011
	1050		BH23-07 4'			012

Relinquished by: EMD Date: 9/13/23 9:00 Time: 9:00
 Relinquished by: AMM Date: 9/13/23 7:00 Time: 7:00

Analysis Request

BTEX / MTBE / TMB's (8021)	X
TPH:8015D(GRO / DRO / MRO)	X
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	X
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	X
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

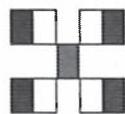
Remarks: cc: KStallings@Vertex.ca

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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



Turn-Around Time:
 Standard Rush 5 Day

Project Name:
 Rattlesnake Fed Units 001

Project #:
 23E-04815

Project Manager:
 Kent Stallings

Sampler: HH
 On Ice: Yes No 4091
 # of Coolers: 1

Cooler Temp (including CF): 1.3-0 = 1.3 C (°C)

Container Type and #	Preservative Type	HEAL No.
		2309763
		013
		014
		015
		016
		017
		018

Chain-of-Custody Record
 Client: Vertex / Devon
Direct Bill

Mailing Address:

Phone #:

Email or Fax#:

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

Accreditation: Az Compliance Other
 NELAC EDD (Type)

Date	Time	Matrix	Sample Name
9/12	1100	Soil	BH23-08 0'
	1110		BH23-08 2'
	1120		BH23-08 4'
	1130		BH23-09 0'
	1140		BH23-09 2'
	1150		BH23-09 4'

Relinquished by: AM Robach
 Date: 9/13/23 Time: 907
 Relinquished by: AM Robach
 Date: 9/13/23 Time: 1900

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)
X	X					X			

Remarks:
 CC K. Stallings @ Vertex.CA



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

September 26, 2023

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

RE: Rattlesnake Federal Unit 001

OrderNo.: 2309918

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 14 sample(s) on 9/16/2023 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 5.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 10:00:00 AM

Lab ID: 2309918-001

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/20/2023 4:29:21 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 4:29:21 PM
Surr: DNOP	104	69-147		%Rec	1	9/20/2023 4:29:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/22/2023 6:37:00 PM
Surr: BFB	93.5	15-244		%Rec	1	9/22/2023 6:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/22/2023 6:37:00 PM
Toluene	ND	0.050		mg/Kg	1	9/22/2023 6:37:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/22/2023 6:37:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/22/2023 6:37:00 PM
Surr: 4-Bromofluorobenzene	86.9	39.1-146		%Rec	1	9/22/2023 6:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	230	60		mg/Kg	20	9/21/2023 9:18:27 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 10:10:00 AM

Lab ID: 2309918-002

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/20/2023 4:50:47 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 4:50:47 PM
Surr: DNOP	101	69-147		%Rec	1	9/20/2023 4:50:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 6:59:00 PM
Surr: BFB	97.1	15-244		%Rec	1	9/22/2023 6:59:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/22/2023 6:59:00 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 6:59:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 6:59:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/22/2023 6:59:00 PM
Surr: 4-Bromofluorobenzene	86.7	39.1-146		%Rec	1	9/22/2023 6:59:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	240	60		mg/Kg	20	9/21/2023 9:30:48 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 10:20:00 AM

Lab ID: 2309918-003

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2023 5:01:34 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2023 5:01:34 PM
Surr: DNOP	99.6	69-147		%Rec	1	9/20/2023 5:01:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 7:20:00 PM
Surr: BFB	99.6	15-244		%Rec	1	9/22/2023 7:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/22/2023 7:20:00 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 7:20:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 7:20:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/22/2023 7:20:00 PM
Surr: 4-Bromofluorobenzene	89.0	39.1-146		%Rec	1	9/22/2023 7:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	98	60		mg/Kg	20	9/21/2023 9:43:10 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 10:30:00 AM

Lab ID: 2309918-004

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/20/2023 5:12:24 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/20/2023 5:12:24 PM
Surr: DNOP	118	69-147		%Rec	1	9/20/2023 5:12:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/22/2023 7:42:00 PM
Surr: BFB	95.9	15-244		%Rec	1	9/22/2023 7:42:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/22/2023 7:42:00 PM
Toluene	ND	0.050		mg/Kg	1	9/22/2023 7:42:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/22/2023 7:42:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/22/2023 7:42:00 PM
Surr: 4-Bromofluorobenzene	85.1	39.1-146		%Rec	1	9/22/2023 7:42:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	240	60		mg/Kg	20	9/21/2023 9:55:31 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 10:40:00 AM

Lab ID: 2309918-005

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2023 5:23:11 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2023 5:23:11 PM
Surr: DNOP	131	69-147		%Rec	1	9/20/2023 5:23:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 8:26:00 PM
Surr: BFB	99.1	15-244		%Rec	1	9/22/2023 8:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/22/2023 8:26:00 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 8:26:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 8:26:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2023 8:26:00 PM
Surr: 4-Bromofluorobenzene	87.3	39.1-146		%Rec	1	9/22/2023 8:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	250	61		mg/Kg	20	9/21/2023 10:07:50 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 10:50:00 AM

Lab ID: 2309918-006

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2023 5:34:00 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2023 5:34:00 PM
Surr: DNOP	91.8	69-147		%Rec	1	9/20/2023 5:34:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 8:47:00 PM
Surr: BFB	95.8	15-244		%Rec	1	9/22/2023 8:47:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/22/2023 8:47:00 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 8:47:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 8:47:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/22/2023 8:47:00 PM
Surr: 4-Bromofluorobenzene	84.4	39.1-146		%Rec	1	9/22/2023 8:47:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	170	60		mg/Kg	20	9/21/2023 10:20:11 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 11:00:00 AM

Lab ID: 2309918-007

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	53	9.8		mg/Kg	1	9/20/2023 5:44:48 PM
Motor Oil Range Organics (MRO)	87	49		mg/Kg	1	9/20/2023 5:44:48 PM
Surr: DNOP	113	69-147		%Rec	1	9/20/2023 5:44:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 9:09:00 PM
Surr: BFB	99.0	15-244		%Rec	1	9/22/2023 9:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/22/2023 9:09:00 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 9:09:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 9:09:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/22/2023 9:09:00 PM
Surr: 4-Bromofluorobenzene	85.7	39.1-146		%Rec	1	9/22/2023 9:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1700	60		mg/Kg	20	9/21/2023 10:32:32 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 4.0

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 11:10:00 AM

Lab ID: 2309918-008

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	270	9.8		mg/Kg	1	9/20/2023 5:55:39 PM
Motor Oil Range Organics (MRO)	470	49		mg/Kg	1	9/20/2023 5:55:39 PM
Surr: DNOP	103	69-147		%Rec	1	9/20/2023 5:55:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 9:52:00 PM
Surr: BFB	96.9	15-244		%Rec	1	9/22/2023 9:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/22/2023 9:52:00 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 9:52:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 9:52:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2023 9:52:00 PM
Surr: 4-Bromofluorobenzene	88.2	39.1-146		%Rec	1	9/22/2023 9:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	3100	150		mg/Kg	50	9/22/2023 11:24:30 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 11:20:00 AM

Lab ID: 2309918-009

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/20/2023 6:36:59 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/20/2023 6:36:59 PM
Surr: DNOP	102	69-147		%Rec	1	9/20/2023 6:36:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 10:14:00 PM
Surr: BFB	96.5	15-244		%Rec	1	9/22/2023 10:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/22/2023 10:14:00 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 10:14:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 10:14:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/22/2023 10:14:00 PM
Surr: 4-Bromofluorobenzene	86.5	39.1-146		%Rec	1	9/22/2023 10:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	9/21/2023 11:21:55 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 2.0

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 11:30:00 AM

Lab ID: 2309918-010

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/20/2023 6:47:55 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2023 6:47:55 PM
Surr: DNOP	106	69-147		%Rec	1	9/20/2023 6:47:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 10:36:00 PM
Surr: BFB	98.5	15-244		%Rec	1	9/22/2023 10:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/22/2023 10:36:00 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 10:36:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 10:36:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2023 10:36:00 PM
Surr: 4-Bromofluorobenzene	86.8	39.1-146		%Rec	1	9/22/2023 10:36:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	160	60		mg/Kg	20	9/22/2023 2:02:25 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 4.0

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 11:40:00 AM

Lab ID: 2309918-011

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2023 6:58:50 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2023 6:58:50 PM
Surr: DNOP	105	69-147		%Rec	1	9/20/2023 6:58:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 10:58:00 PM
Surr: BFB	91.4	15-244		%Rec	1	9/22/2023 10:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/22/2023 10:58:00 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 10:58:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 10:58:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2023 10:58:00 PM
Surr: 4-Bromofluorobenzene	87.1	39.1-146		%Rec	1	9/22/2023 10:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	360	60		mg/Kg	20	9/22/2023 2:14:46 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 0.0

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 11:50:00 AM

Lab ID: 2309918-012

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/21/2023 9:40:48 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/21/2023 9:40:48 PM
Surr: DNOP	109	69-147		%Rec	1	9/21/2023 9:40:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/22/2023 2:30:26 PM
Surr: BFB	94.9	15-244		%Rec	1	9/22/2023 2:30:26 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	9/22/2023 2:30:26 PM
Toluene	ND	0.046		mg/Kg	1	9/22/2023 2:30:26 PM
Ethylbenzene	ND	0.046		mg/Kg	1	9/22/2023 2:30:26 PM
Xylenes, Total	ND	0.093		mg/Kg	1	9/22/2023 2:30:26 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	9/22/2023 2:30:26 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	4600	150		mg/Kg	50	9/22/2023 11:36:51 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 12:00:00 PM

Lab ID: 2309918-013

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	33	9.9		mg/Kg	1	9/21/2023 9:51:54 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/21/2023 9:51:54 PM
Surr: DNOP	123	69-147		%Rec	1	9/21/2023 9:51:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/22/2023 2:53:50 PM
Surr: BFB	94.4	15-244		%Rec	1	9/22/2023 2:53:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/22/2023 2:53:50 PM
Toluene	ND	0.047		mg/Kg	1	9/22/2023 2:53:50 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/22/2023 2:53:50 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/22/2023 2:53:50 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	9/22/2023 2:53:50 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	620	60		mg/Kg	20	9/22/2023 2:39:27 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309918**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 4.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/14/2023 12:10:00 PM

Lab ID: 2309918-014

Matrix: SOIL

Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/21/2023 10:13:55 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/21/2023 10:13:55 PM
Surr: DNOP	104	69-147		%Rec	1	9/21/2023 10:13:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 3:17:17 PM
Surr: BFB	95.4	15-244		%Rec	1	9/22/2023 3:17:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/22/2023 3:17:17 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 3:17:17 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 3:17:17 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/22/2023 3:17:17 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/22/2023 3:17:17 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	550	60		mg/Kg	20	9/22/2023 2:51:48 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309918

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: MB-77667	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77667	RunNo: 99905								
Prep Date: 9/21/2023	Analysis Date: 9/21/2023	SeqNo: 3653545	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77667	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77667	RunNo: 99905								
Prep Date: 9/21/2023	Analysis Date: 9/21/2023	SeqNo: 3653546	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.5	90	110			

Sample ID: MB-77681	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77681	RunNo: 99905								
Prep Date: 9/21/2023	Analysis Date: 9/21/2023	SeqNo: 3653577	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77681	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77681	RunNo: 99905								
Prep Date: 9/21/2023	Analysis Date: 9/21/2023	SeqNo: 3653578	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309918

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: LCS-77617	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77617	RunNo: 99836								
Prep Date: 9/19/2023	Analysis Date: 9/20/2023	SeqNo: 3649951	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.4	61.9	130			
Surr: DNOP	5.3		5.000		107	69	147			

Sample ID: MB-77617	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77617	RunNo: 99836								
Prep Date: 9/19/2023	Analysis Date: 9/20/2023	SeqNo: 3649954	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	10		10.00		103	69	147			

Sample ID: LCS-77648	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77648	RunNo: 99892								
Prep Date: 9/20/2023	Analysis Date: 9/21/2023	SeqNo: 3653953	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	61.9	130			
Surr: DNOP	4.6		5.000		92.7	69	147			

Sample ID: MB-77648	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77648	RunNo: 99892								
Prep Date: 9/20/2023	Analysis Date: 9/21/2023	SeqNo: 3653955	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	9.4		10.00		94.1	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309918

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-77588	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 77588	RunNo: 99907								
Prep Date: 9/18/2023	Analysis Date: 9/22/2023	SeqNo: 3654552	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.4	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: mb-77588	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 77588	RunNo: 99907								
Prep Date: 9/18/2023	Analysis Date: 9/22/2023	SeqNo: 3654553	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		100	15	244			

Sample ID: ics-77607	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 77607	RunNo: 99922								
Prep Date: 9/19/2023	Analysis Date: 9/22/2023	SeqNo: 3655350	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.8	70	130			
Surr: BFB	2000		1000		203	15	244			

Sample ID: mb-77607	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 77607	RunNo: 99922								
Prep Date: 9/19/2023	Analysis Date: 9/22/2023	SeqNo: 3655354	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	920		1000		92.4	15	244			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309918

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-77588	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77588		RunNo: 99907							
Prep Date: 9/18/2023	Analysis Date: 9/22/2023		SeqNo: 3654566		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	82.4	70	130			
Toluene	0.83	0.050	1.000	0	83.1	70	130			
Ethylbenzene	0.85	0.050	1.000	0	85.2	70	130			
Xylenes, Total	2.6	0.10	3.000	0	85.1	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.4	39.1	146			

Sample ID: mb-77588	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77588		RunNo: 99907							
Prep Date: 9/18/2023	Analysis Date: 9/22/2023		SeqNo: 3654567		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		87.0	39.1	146			

Sample ID: LCS-77607	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77607		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655469		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.7	70	130			
Toluene	0.96	0.050	1.000	0	95.8	70	130			
Ethylbenzene	0.96	0.050	1.000	0	96.4	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.0	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	39.1	146			

Sample ID: mb-77607	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77607		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655476		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	0.98		1.000		98.2	39.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309918

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: 2309918-012ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-14 0.0	Batch ID: 77607	RunNo: 99922								
Prep Date: 9/19/2023	Analysis Date: 9/23/2023	SeqNo: 3655523	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.023	0.9259	0	104	70	130			
Toluene	0.99	0.046	0.9259	0	107	70	130			
Ethylbenzene	0.99	0.046	0.9259	0	106	70	130			
Xylenes, Total	3.0	0.093	2.778	0	107	70	130			
Surr: 4-Bromofluorobenzene	0.97		0.9259		105	39.1	146			

Sample ID: 2309918-012amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-14 0.0	Batch ID: 77607	RunNo: 99922								
Prep Date: 9/19/2023	Analysis Date: 9/23/2023	SeqNo: 3655524	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.023	0.9234	0	104	70	130	0.738	20	
Toluene	0.96	0.046	0.9234	0	104	70	130	3.01	20	
Ethylbenzene	0.97	0.046	0.9234	0	105	70	130	1.31	20	
Xylenes, Total	2.9	0.092	2.770	0	106	70	130	1.61	20	
Surr: 4-Bromofluorobenzene	0.97		0.9234		105	39.1	146	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: **Devon Energy** Work Order Number: **2309918** RcptNo: **1**

Received By: **Juan Rojas** 9/16/2023 7:30:00 AM *Juan Rojas*
 Completed By: **Juan Rojas** 9/16/2023 8:38:29 AM *Juan Rojas*
 Reviewed By: *[Signature]* 9/18/23

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? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *JM 9/16/23*

Special Handling (if applicable)

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

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:
 Client missing mailing address, phone number and email address on COC. JR 9/16/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0	Good	No	Yogi		

Chain-of-Custody Record

Client: Devon
 Project Name: Rattlesnake Federal Unit #001
 Mailing Address: 23E-04B15

Turn-Around Time: Standard Rush 5 Day
 Project #: 23E-04B15
 Project Manager: Kent Stallings
 Sampler: AK
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 0.1-0.15°C (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
11-14-23	1000	Soil	BH23-05 5.0'	402	165	2309918 -001
	1010		BH23-10 0.0			-002
	1020		BH23-10 2.0			-003
	1030		BH23-11 0.0			-004
	1040		BH23-11 2.0			-005
	1050		BH23-12 0.0			-006
	1100		BH23-12 2.0			-007
	1110		BH23-12 4.0			-008
	1120		BH23-13 0.0			-009
	1130		BH23-13 2.0			-010
	1140		BH23-13 4.0			-011
	1150		BH23-14 0.0			-012

Accreditation: Az Compliance Level 4 (Full Validation)
 NELAC Other
 EDD (Type) _____
 Relinquished by: [Signature] Date: 11/14/23 Time: 1900
 Received by: [Signature] Date: 9/15/23 Time: 900
 Via: [Signature]
 Received by: [Signature] Date: 9/16/23 Time: 7:30
 Via: [Signature]



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

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)	

Remarks: CC: Kstallings@vertex.ca
aharris@vertex.ca



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

September 26, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (575) 748-0176

FAX:

RE: Rattlesnake Federal Unit 001

OrderNo.: 2309971

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 11 sample(s) on 9/19/2023 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,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 9:00:00 AM

Lab ID: 2309971-001

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/21/2023 10:24:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/21/2023 10:24:57 PM
Surr: DNOP	94.6	69-147		%Rec	1	9/21/2023 10:24:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 6:48:01 PM
Surr: BFB	93.9	15-244		%Rec	1	9/22/2023 6:48:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/22/2023 6:48:01 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 6:48:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 6:48:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2023 6:48:01 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/22/2023 6:48:01 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	9/22/2023 3:04:08 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 9:10:00 AM

Lab ID: 2309971-002

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	370	89		mg/Kg	10	9/21/2023 10:35:54 PM
Motor Oil Range Organics (MRO)	510	450		mg/Kg	10	9/21/2023 10:35:54 PM
Surr: DNOP	0	69-147	S	%Rec	10	9/21/2023 10:35:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 7:11:30 PM
Surr: BFB	99.8	15-244		%Rec	1	9/22/2023 7:11:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/22/2023 7:11:30 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 7:11:30 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 7:11:30 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/22/2023 7:11:30 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/22/2023 7:11:30 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2100	150		mg/Kg	50	9/22/2023 12:13:51 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 9:20:00 AM

Lab ID: 2309971-003

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	9/21/2023 10:46:50 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/21/2023 10:46:50 PM
Surr: DNOP	105	69-147		%Rec	1	9/21/2023 10:46:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/22/2023 7:34:48 PM
Surr: BFB	93.4	15-244		%Rec	1	9/22/2023 7:34:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/22/2023 7:34:48 PM
Toluene	ND	0.050		mg/Kg	1	9/22/2023 7:34:48 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/22/2023 7:34:48 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/22/2023 7:34:48 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/22/2023 7:34:48 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	9/22/2023 3:28:49 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 9:30:00 AM

Lab ID: 2309971-004

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	9/21/2023 10:57:51 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	9/21/2023 10:57:51 PM
Surr: DNOP	99.7	69-147		%Rec	1	9/21/2023 10:57:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 7:58:06 PM
Surr: BFB	94.2	15-244		%Rec	1	9/22/2023 7:58:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/22/2023 7:58:06 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 7:58:06 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 7:58:06 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/22/2023 7:58:06 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/22/2023 7:58:06 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	810	60		mg/Kg	20	9/22/2023 4:05:51 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 3.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 9:40:00 AM

Lab ID: 2309971-005

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/21/2023 11:08:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/21/2023 11:08:49 PM
Surr: DNOP	97.8	69-147		%Rec	1	9/21/2023 11:08:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 8:21:27 PM
Surr: BFB	96.7	15-244		%Rec	1	9/22/2023 8:21:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/22/2023 8:21:27 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 8:21:27 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 8:21:27 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/22/2023 8:21:27 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/22/2023 8:21:27 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1900	60		mg/Kg	20	9/22/2023 4:18:12 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 9:50:00 AM

Lab ID: 2309971-006

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	9/21/2023 11:19:50 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	9/21/2023 11:19:50 PM
Surr: DNOP	100	69-147		%Rec	1	9/21/2023 11:19:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/22/2023 8:44:59 PM
Surr: BFB	94.6	15-244		%Rec	1	9/22/2023 8:44:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/22/2023 8:44:59 PM
Toluene	ND	0.050		mg/Kg	1	9/22/2023 8:44:59 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/22/2023 8:44:59 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/22/2023 8:44:59 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/22/2023 8:44:59 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2600	150		mg/Kg	50	9/22/2023 12:26:11 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 10:00:00 AM

Lab ID: 2309971-007

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	10	8.8		mg/Kg	1	9/21/2023 11:30:53 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	9/21/2023 11:30:53 PM
Surr: DNOP	100	69-147		%Rec	1	9/21/2023 11:30:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/22/2023 9:31:56 PM
Surr: BFB	93.8	15-244		%Rec	1	9/22/2023 9:31:56 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/22/2023 9:31:56 PM
Toluene	ND	0.048		mg/Kg	1	9/22/2023 9:31:56 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/22/2023 9:31:56 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/22/2023 9:31:56 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/22/2023 9:31:56 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2000	60		mg/Kg	20	9/22/2023 4:42:53 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 4.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 10:10:00 AM

Lab ID: 2309971-008

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/21/2023 11:41:53 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/21/2023 11:41:53 PM
Surr: DNOP	96.1	69-147		%Rec	1	9/21/2023 11:41:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/22/2023 9:55:15 PM
Surr: BFB	93.9	15-244		%Rec	1	9/22/2023 9:55:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	9/22/2023 9:55:15 PM
Toluene	ND	0.046		mg/Kg	1	9/22/2023 9:55:15 PM
Ethylbenzene	ND	0.046		mg/Kg	1	9/22/2023 9:55:15 PM
Xylenes, Total	ND	0.093		mg/Kg	1	9/22/2023 9:55:15 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/22/2023 9:55:15 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2000	150		mg/Kg	50	9/22/2023 12:38:33 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 10:20:00 AM

Lab ID: 2309971-009

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	9/21/2023 11:52:57 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/21/2023 11:52:57 PM
Surr: DNOP	100	69-147		%Rec	1	9/21/2023 11:52:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/22/2023 10:18:31 PM
Surr: BFB	94.8	15-244		%Rec	1	9/22/2023 10:18:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/22/2023 10:18:31 PM
Toluene	ND	0.050		mg/Kg	1	9/22/2023 10:18:31 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/22/2023 10:18:31 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/22/2023 10:18:31 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/22/2023 10:18:31 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	680	60		mg/Kg	20	9/22/2023 5:07:34 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 10:30:00 AM

Lab ID: 2309971-010

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/22/2023 12:04:05 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/22/2023 12:04:05 AM
Surr: DNOP	95.8	69-147		%Rec	1	9/22/2023 12:04:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2023 11:05:10 PM
Surr: BFB	95.1	15-244		%Rec	1	9/22/2023 11:05:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	9/22/2023 11:05:10 PM
Toluene	ND	0.049		mg/Kg	1	9/22/2023 11:05:10 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/22/2023 11:05:10 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/22/2023 11:05:10 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/22/2023 11:05:10 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	780	60		mg/Kg	20	9/22/2023 5:19:55 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2309971**

Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 4.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 9/15/2023 10:40:00 AM

Lab ID: 2309971-011

Matrix: SOIL

Received Date: 9/19/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/22/2023 12:15:09 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/22/2023 12:15:09 AM
Surr: DNOP	98.9	69-147		%Rec	1	9/22/2023 12:15:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/23/2023 1:02:30 AM
Surr: BFB	93.6	15-244		%Rec	1	9/23/2023 1:02:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/23/2023 1:02:30 AM
Toluene	ND	0.048		mg/Kg	1	9/23/2023 1:02:30 AM
Ethylbenzene	ND	0.048		mg/Kg	1	9/23/2023 1:02:30 AM
Xylenes, Total	ND	0.095		mg/Kg	1	9/23/2023 1:02:30 AM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/23/2023 1:02:30 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2000	150		mg/Kg	50	9/22/2023 12:50:54 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309971

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: MB-77681	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77681	RunNo: 99905								
Prep Date: 9/21/2023	Analysis Date: 9/21/2023	SeqNo: 3653577	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77681	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77681	RunNo: 99905								
Prep Date: 9/21/2023	Analysis Date: 9/21/2023	SeqNo: 3653578	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309971

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: LCS-77648	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77648	RunNo: 99892								
Prep Date: 9/20/2023	Analysis Date: 9/21/2023	SeqNo: 3653953	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	61.9	130			
Surr: DNOP	4.6		5.000		92.7	69	147			

Sample ID: MB-77648	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77648	RunNo: 99892								
Prep Date: 9/20/2023	Analysis Date: 9/21/2023	SeqNo: 3653955	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	9.4		10.00		94.1	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309971

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-77607	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77607		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655350		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.8	70	130			
Surr: BFB	2000		1000		203	15	244			

Sample ID: ics-77620	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77620		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655351		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.7	70	130			
Surr: BFB	2000		1000		200	15	244			

Sample ID: MB-77620	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77620		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655353		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	960		1000		95.6	15	244			

Sample ID: mb-77607	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77607		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655354		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	920		1000		92.4	15	244			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2309971

26-Sep-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: LCS-77607	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77607		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655469		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.7	70	130			
Toluene	0.96	0.050	1.000	0	95.8	70	130			
Ethylbenzene	0.96	0.050	1.000	0	96.4	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.0	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	39.1	146			

Sample ID: LCS-77620	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77620		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655471		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	99.8	70	130			
Toluene	1.0	0.050	1.000	0	99.8	70	130			
Ethylbenzene	1.0	0.050	1.000	0	99.8	70	130			
Xylenes, Total	3.0	0.10	3.000	0	101	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	39.1	146			

Sample ID: MB-77620	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77620		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655474		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	39.1	146			

Sample ID: mb-77607	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77607		RunNo: 99922							
Prep Date: 9/19/2023	Analysis Date: 9/22/2023		SeqNo: 3655476		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	0.98		1.000		98.2	39.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2309971 RcptNo: 1

Received By: Juan Rojas 9/19/2023 7:35:00 AM
Completed By: Tracy Casarrubias 9/19/2023 8:02:05 AM
Reviewed By: [Signature] 9-19-23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: [Signature] 9/19/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC- TMC 9/19/23

16. Additional remarks: Client did not relinquish chain of custody

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 2.4, Good, Yes, Yogi, [], []

Chain-of-Custody Record

Client: Devon

Direct Bill

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Sampler: AT

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 7-36.1-24 (°C)

Container Type and #

Preservative Type

HEAL No.

2309971

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

Turn-Around Time:

Standard Rush 5 Day

Project Name:

Resilienside Federal Unit #1001

Project #:

23E-04B15

Project Manager:

Kent Stallings

Sampler:

AT

On Ice:

Yes No

of Coolers:

1

Cooler Temp (including CF):

7-36.1-24 (°C)

Container Type and #

402

16E

100

200

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

8081 Pesticides/8082 PCBs

TPH:015D(GRO / DRO / MRO)

BTEX / MTBE / TMB's (8021)

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl⁻, Br⁻, NO₃⁻, NO₂⁻, PO₄⁻, SO₄⁻

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Remarks:

CC: kstallings@vertex.ca

charris@vertex.ca

Received by: W. Harris Date: 9/10/13 Time: 1000

Via:

Date: 9/10/13 Time: 7:35

Relinquished by:

Date: 9/10/13 Time: 1900

Relinquished by:

Date: 9/10/13 Time: 1900



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

October 24, 2023

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

RE: Rattlesnake Federal Unit 001

OrderNo.: 2310830

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 16 sample(s) on 10/18/2023 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 9:00:00 AM

Lab ID: 2310830-001

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/19/2023 12:51:13 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/19/2023 12:51:13 PM
Surr: DNOP	98.7	69-147		%Rec	1	10/19/2023 12:51:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 10:00:00 PM
Surr: BFB	99.0	15-244		%Rec	1	10/19/2023 10:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/19/2023 10:00:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 10:00:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 10:00:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2023 10:00:00 PM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	10/19/2023 10:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 5:34:45 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 9:10:00 AM

Lab ID: 2310830-002

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/19/2023 1:01:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2023 1:01:50 PM
Surr: DNOP	99.0	69-147		%Rec	1	10/19/2023 1:01:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2023 10:22:00 PM
Surr: BFB	99.4	15-244		%Rec	1	10/19/2023 10:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/19/2023 10:22:00 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2023 10:22:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2023 10:22:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/19/2023 10:22:00 PM
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	10/19/2023 10:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	120	60		mg/Kg	20	10/20/2023 5:47:09 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 9:20:00 AM

Lab ID: 2310830-003

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/19/2023 1:12:26 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2023 1:12:26 PM
Surr: DNOP	96.1	69-147		%Rec	1	10/19/2023 1:12:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2023 10:43:00 PM
Surr: BFB	101	15-244		%Rec	1	10/19/2023 10:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	10/19/2023 10:43:00 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2023 10:43:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2023 10:43:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/19/2023 10:43:00 PM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	10/19/2023 10:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	560	60		mg/Kg	20	10/20/2023 5:59:34 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 9:30:00 AM

Lab ID: 2310830-004

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/19/2023 1:23:06 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/19/2023 1:23:06 PM
Surr: DNOP	103	69-147		%Rec	1	10/19/2023 1:23:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 11:05:00 PM
Surr: BFB	97.7	15-244		%Rec	1	10/19/2023 11:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/19/2023 11:05:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 11:05:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 11:05:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2023 11:05:00 PM
Surr: 4-Bromofluorobenzene	88.2	39.1-146		%Rec	1	10/19/2023 11:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	510	60		mg/Kg	20	10/20/2023 6:11:59 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-23 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 9:40:00 AM

Lab ID: 2310830-005

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/19/2023 1:33:45 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/19/2023 1:33:45 PM
Surr: DNOP	102	69-147		%Rec	1	10/19/2023 1:33:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/19/2023 11:48:00 PM
Surr: BFB	98.7	15-244		%Rec	1	10/19/2023 11:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	10/19/2023 11:48:00 PM
Toluene	ND	0.047		mg/Kg	1	10/19/2023 11:48:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/19/2023 11:48:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/19/2023 11:48:00 PM
Surr: 4-Bromofluorobenzene	87.1	39.1-146		%Rec	1	10/19/2023 11:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 6:24:23 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-23 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 9:50:00 AM

Lab ID: 2310830-006

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	14	9.3		mg/Kg	1	10/19/2023 1:44:24 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/19/2023 1:44:24 PM
Surr: DNOP	98.8	69-147		%Rec	1	10/19/2023 1:44:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2023 12:10:00 AM
Surr: BFB	101	15-244		%Rec	1	10/20/2023 12:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/20/2023 12:10:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2023 12:10:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2023 12:10:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2023 12:10:00 AM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	10/20/2023 12:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	240	60		mg/Kg	20	10/20/2023 7:01:37 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-24 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 10:00:00 AM

Lab ID: 2310830-007

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/20/2023 11:43:37 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2023 11:43:37 PM
Surr: DNOP	98.1	69-147		%Rec	1	10/20/2023 11:43:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2023 12:19:52 PM
Surr: BFB	95.6	15-244		%Rec	1	10/19/2023 12:19:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	10/19/2023 12:19:52 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2023 12:19:52 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2023 12:19:52 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/19/2023 12:19:52 PM
Surr: 4-Bromofluorobenzene	99.2	39.1-146		%Rec	1	10/19/2023 12:19:52 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	540	60		mg/Kg	20	10/20/2023 7:14:02 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-24 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 10:10:00 AM

Lab ID: 2310830-008

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	28	9.3		mg/Kg	1	10/21/2023 12:15:58 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/21/2023 12:15:58 AM
Surr: DNOP	70.1	69-147		%Rec	1	10/21/2023 12:15:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 12:43:36 PM
Surr: BFB	89.7	15-244		%Rec	1	10/19/2023 12:43:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 12:43:36 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 12:43:36 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 12:43:36 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2023 12:43:36 PM
Surr: 4-Bromofluorobenzene	96.3	39.1-146		%Rec	1	10/19/2023 12:43:36 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	180	60		mg/Kg	20	10/20/2023 7:26:27 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-25 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 10:20:00 AM

Lab ID: 2310830-009

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/21/2023 12:26:45 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/21/2023 12:26:45 AM
Surr: DNOP	105	69-147		%Rec	1	10/21/2023 12:26:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 1:07:21 PM
Surr: BFB	90.6	15-244		%Rec	1	10/19/2023 1:07:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 1:07:21 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 1:07:21 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 1:07:21 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2023 1:07:21 PM
Surr: 4-Bromofluorobenzene	97.1	39.1-146		%Rec	1	10/19/2023 1:07:21 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 7:38:52 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-25 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 10:30:00 AM

Lab ID: 2310830-010

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	10/21/2023 12:37:33 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/21/2023 12:37:33 AM
Surr: DNOP	76.4	69-147		%Rec	1	10/21/2023 12:37:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2023 1:30:58 PM
Surr: BFB	94.3	15-244		%Rec	1	10/19/2023 1:30:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 1:30:58 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2023 1:30:58 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2023 1:30:58 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/19/2023 1:30:58 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	10/19/2023 1:30:58 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 7:51:16 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-25 4.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 10:40:00 AM

Lab ID: 2310830-011

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/21/2023 12:48:22 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/21/2023 12:48:22 AM
Surr: DNOP	89.9	69-147		%Rec	1	10/21/2023 12:48:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 1:54:19 PM
Surr: BFB	94.7	15-244		%Rec	1	10/19/2023 1:54:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 1:54:19 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 1:54:19 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 1:54:19 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/19/2023 1:54:19 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	10/19/2023 1:54:19 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 8:03:41 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-25 5.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/16/2023 10:50:00 AM

Lab ID: 2310830-012

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/21/2023 12:59:11 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/21/2023 12:59:11 AM
Surr: DNOP	87.6	69-147		%Rec	1	10/21/2023 12:59:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 3:28:12 PM
Surr: BFB	93.1	15-244		%Rec	1	10/19/2023 3:28:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 3:28:12 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 3:28:12 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 3:28:12 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/19/2023 3:28:12 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	10/19/2023 3:28:12 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 8:40:54 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-19 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/14/2023 9:00:00 AM

Lab ID: 2310830-013

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/21/2023 3:42:20 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/21/2023 3:42:20 AM
Surr: DNOP	87.9	69-147		%Rec	1	10/21/2023 3:42:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/19/2023 4:38:14 PM
Surr: BFB	91.1	15-244		%Rec	1	10/19/2023 4:38:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 4:38:14 PM
Toluene	ND	0.047		mg/Kg	1	10/19/2023 4:38:14 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/19/2023 4:38:14 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/19/2023 4:38:14 PM
Surr: 4-Bromofluorobenzene	99.5	39.1-146		%Rec	1	10/19/2023 4:38:14 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 8:53:18 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-19 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/14/2023 9:10:00 AM

Lab ID: 2310830-014

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/21/2023 1:10:01 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/21/2023 1:10:01 AM
Surr: DNOP	85.9	69-147		%Rec	1	10/21/2023 1:10:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/19/2023 5:01:37 PM
Surr: BFB	96.5	15-244		%Rec	1	10/19/2023 5:01:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	10/19/2023 5:01:37 PM
Toluene	ND	0.050		mg/Kg	1	10/19/2023 5:01:37 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/19/2023 5:01:37 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/19/2023 5:01:37 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	10/19/2023 5:01:37 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2023 10:20:10 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-20 0.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/14/2023 9:20:00 AM

Lab ID: 2310830-015

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/21/2023 1:20:52 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/21/2023 1:20:52 AM
Surr: DNOP	89.4	69-147		%Rec	1	10/21/2023 1:20:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2023 5:24:54 PM
Surr: BFB	93.2	15-244		%Rec	1	10/19/2023 5:24:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 5:24:54 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2023 5:24:54 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2023 5:24:54 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/19/2023 5:24:54 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	10/19/2023 5:24:54 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	310	60		mg/Kg	20	10/20/2023 10:32:34 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2310830**

Date Reported: **10/24/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-20 2.0'

Project: Rattlesnake Federal Unit 001

Collection Date: 10/14/2023 9:30:00 AM

Lab ID: 2310830-016

Matrix: SOIL

Received Date: 10/18/2023 7:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	10/21/2023 1:31:43 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/21/2023 1:31:43 AM
Surr: DNOP	88.9	69-147		%Rec	1	10/21/2023 1:31:43 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2023 5:48:39 PM
Surr: BFB	90.8	15-244		%Rec	1	10/19/2023 5:48:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/19/2023 5:48:39 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2023 5:48:39 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2023 5:48:39 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/19/2023 5:48:39 PM
Surr: 4-Bromofluorobenzene	98.3	39.1-146		%Rec	1	10/19/2023 5:48:39 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	150	60		mg/Kg	20	10/20/2023 10:44:59 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: MB-78269	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 78269	RunNo: 100629								
Prep Date: 10/20/2023	Analysis Date: 10/20/2023	SeqNo: 3689507	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78269	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 78269	RunNo: 100629								
Prep Date: 10/20/2023	Analysis Date: 10/20/2023	SeqNo: 3689508	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.0	90	110			

Sample ID: MB-78279	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 78279	RunNo: 100629								
Prep Date: 10/20/2023	Analysis Date: 10/20/2023	SeqNo: 3689537	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78279	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 78279	RunNo: 100629								
Prep Date: 10/20/2023	Analysis Date: 10/20/2023	SeqNo: 3689538	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: LCS-78235	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78235	RunNo: 100548								
Prep Date: 10/18/2023	Analysis Date: 10/19/2023	SeqNo: 3687181	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.7	61.9	130			
Surr: DNOP	4.2		5.000		84.1	69	147			

Sample ID: MB-78235	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78235	RunNo: 100548								
Prep Date: 10/18/2023	Analysis Date: 10/19/2023	SeqNo: 3687182	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	8.8		10.00		88.1	69	147			

Sample ID: LCS-78243	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78243	RunNo: 100627								
Prep Date: 10/19/2023	Analysis Date: 10/20/2023	SeqNo: 3689324	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.3	61.9	130			
Surr: DNOP	4.5		5.000		89.7	69	147			

Sample ID: MB-78243	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78243	RunNo: 100627								
Prep Date: 10/19/2023	Analysis Date: 10/20/2023	SeqNo: 3689328	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	9.1		10.00		91.5	69	147			

Sample ID: 2310830-007AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-24 0.0'	Batch ID: 78243	RunNo: 100627								
Prep Date: 10/19/2023	Analysis Date: 10/20/2023	SeqNo: 3689691	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.4	46.82	0	93.7	54.2	135			
Surr: DNOP	3.6		4.682		77.0	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: 2310830-007AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-24 0.0'	Batch ID: 78243	RunNo: 100627								
Prep Date: 10/19/2023	Analysis Date: 10/21/2023	SeqNo: 3689692 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.7	48.50	0	115	54.2	135	24.2	29.2	
Surr: DNOP	4.7		4.850		96.2	69	147	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-78237	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687197		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.6	70	130			
Surr: BFB	1900		1000		192	15	244			

Sample ID: mb-78237	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687198		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	920		1000		92.5	15	244			

Sample ID: 2310830-007ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-24 0.0'	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687976		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.68	0	103	70	130			
Surr: BFB	2100		987.2		210	15	244			

Sample ID: 2310830-007amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-24 0.0'	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687977		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.56	0	96.2	70	130	7.20	20	
Surr: BFB	2000		982.3		199	15	244	0	0	

Sample ID: ics-78227	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 78227		RunNo: 100580							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3688395		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	97.8	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: mb-78227	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 78227		RunNo: 100580							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3688396		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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: mb-78227	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 78227	RunNo: 100580								
Prep Date: 10/18/2023	Analysis Date: 10/19/2023	SeqNo: 3688396			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	990		1000		98.9	15	244			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: LCS-78237	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687200		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.5	70	130			
Toluene	0.88	0.050	1.000	0	87.6	70	130			
Ethylbenzene	0.89	0.050	1.000	0	89.3	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.2	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	39.1	146			

Sample ID: mb-78237	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687201		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	39.1	146			

Sample ID: 2310830-008ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-24 2.0'	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687980		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9653	0	89.1	70	130			
Toluene	0.89	0.048	0.9653	0	92.4	70	130			
Ethylbenzene	0.91	0.048	0.9653	0	94.5	70	130			
Xylenes, Total	2.7	0.097	2.896	0	94.3	70	130			
Surr: 4-Bromofluorobenzene	0.99		0.9653		103	39.1	146			

Sample ID: 2310830-008amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-24 2.0'	Batch ID: 78237		RunNo: 100590							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3687981		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9625	0	86.1	70	130	3.74	20	
Toluene	0.86	0.048	0.9625	0	89.1	70	130	3.93	20	
Ethylbenzene	0.87	0.048	0.9625	0	90.3	70	130	4.78	20	
Xylenes, Total	2.6	0.096	2.887	0	90.3	70	130	4.65	20	
Surr: 4-Bromofluorobenzene	0.98		0.9625		101	39.1	146	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2310830

24-Oct-23

Client: Devon Energy
Project: Rattlesnake Federal Unit 001

Sample ID: ics-78227	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 78227		RunNo: 100580							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3688352		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	82.1	70	130			
Toluene	0.85	0.050	1.000	0	84.5	70	130			
Ethylbenzene	0.87	0.050	1.000	0	87.5	70	130			
Xylenes, Total	2.6	0.10	3.000	0	87.0	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	39.1	146			

Sample ID: mb-78227	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 78227		RunNo: 100580							
Prep Date: 10/18/2023	Analysis Date: 10/19/2023		SeqNo: 3688353		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	0.89		1.000		89.2	39.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2310830 RcptNo: 1

Received By: Tracy Casarrubias 10/18/2023 7:18:00 AM

Completed By: Tracy Casarrubias 10/18/2023 7:52:57 AM

Reviewed By: SCM 10/18/23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: Adjusted? Checked by: JWC 10/18/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: Date:
By Whom: Via: [] eMail [] Phone [] Fax [] In Person
Regarding:
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC - TMC 10/18/23

16. Additional remarks: Client did not relinquish chain of custody

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 3.7, Good, Yes, Morty

Chain-of-Custody Record

Client: Devon

Mailing Address: Direct Bill

Phone #: _____

email or Fax#: _____

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type) _____

Turn-Around Time:

Standard Rush 5:00AM

Project Name: Rattlesnake Federal Unit #1001

Project #: 23E-04815

Project Manager:

Ken Stallings

Sampler: NA

On Ice: Yes No matry

of Coolers: 1

Cooler Temp (including CF): 3.7-0.2-3.7 (°C)

Container Type and #

Preservative Type

HEAL No. 2310830

Container Type and #

Preservative Type

HEAL No.

Date: 10/16/23 Time: 0900

Date: 10/16/23 Time: 0910

Date: 10/16/23 Time: 0920

Date: 10/16/23 Time: 0930

Date: 10/16/23 Time: 0940

Date: 10/16/23 Time: 0950

Date: 10/16/23 Time: 1006

Date: 10/16/23 Time: 1010

Date: 10/16/23 Time: 1020

Date: 10/16/23 Time: 1030

Date: 10/16/23 Time: 1040

Date: 10/16/23 Time: 1050

Relinquished by: _____

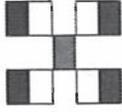
Received by: _____

Date: 10/16/23 Time: 9:00

Date: 10/18/23 Time: 7:18

Remarks:

CC: stallings@vertex.ca
charniss@vertex.ca



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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, NO₂, NO₃, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Chain-of-Custody Record

Client: Devon

Mailing Address: Direct Bill

Project Name: Rattlesnake Federal Unit #1001

Project #: 23E-04815

Project Manager: Kent Stallings

Sampler: AM

On Ice: Yes No morta

of Coolers: 1

Cooler Temp (including CF): 32-0-37 (°C)

Container Type and #

Preservative Type

HEAL No. 2310830

Date

Matrix

Sample Name

Time

0900

0910

0920

0930

BH23-19

BH23-19

BH23-20

BH23-20

0.0'

0.0'

0.0'

2.0'

2.0'

Relinquished by:

Time:

Relinquished by:

Time:

10/17/23 10:00

10/18/23 7:18

Turn-Around Time: Standard Rush 5 DWA

Project Name: Rattlesnake Federal Unit #1001

Project #: 23E-04815

Project Manager: Kent Stallings

Sampler: AM

On Ice: Yes No morta

of Coolers: 1

Cooler Temp (including CF): 32-0-37 (°C)

Container Type and #

Preservative Type

HEAL No. 2310830

Date

Matrix

Sample Name

Time

0900

0910

0920

0930

BH23-19

BH23-19

BH23-20

BH23-20

0.0'

0.0'

0.0'

2.0'

2.0'

Relinquished by:

Time:

Relinquished by:

Time:

10/17/23 10:00

10/18/23 7:18

Standard Rush 5 DWA

Project Name: Rattlesnake Federal Unit #1001

Project #: 23E-04815

Project Manager: Kent Stallings

Sampler: AM

On Ice: Yes No morta

of Coolers: 1

Cooler Temp (including CF): 32-0-37 (°C)

Container Type and #

Preservative Type

HEAL No. 2310830

Date

Matrix

Sample Name

Time

0900

0910

0920

0930

BH23-19

BH23-19

BH23-20

BH23-20

0.0'

0.0'

0.0'

2.0'

2.0'

Relinquished by:

Time:

Relinquished by:

Time:

10/17/23 10:00

10/18/23 7:18

Standard Rush 5 DWA

Project Name: Rattlesnake Federal Unit #1001

Project #: 23E-04815

Project Manager: Kent Stallings

Sampler: AM

On Ice: Yes No morta

of Coolers: 1

Cooler Temp (including CF): 32-0-37 (°C)

Container Type and #

Preservative Type

HEAL No. 2310830

Date

Matrix

Sample Name

Time

0900

0910

0920

0930

BH23-19

BH23-19

BH23-20

BH23-20

0.0'

0.0'

0.0'

2.0'

2.0'

Relinquished by:

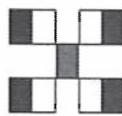
Time:

Relinquished by:

Time:

10/17/23 10:00

10/18/23 7:18



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

TPH: 8015D(GRO / DRO / MRO)

BTEX / MTBE / TMB's (8021)

Remarks:

CL: Kstallings @ vertex ca

aharris @ vertex. ca



Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 08, 2024

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL:

FAX:

RE: Rattlesnake Federal Unit 001

OrderNo.: 2312F03

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 5 sample(s) on 12/29/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2312F03**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-12 6'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/20/2023 12:00:00 PM

Lab ID: 2312F03-001

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/1/2024 9:15:50 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/1/2024 9:15:50 PM
Surr: DNOP	93.9	69-147		%Rec	1	1/1/2024 9:15:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2024 11:29:32 AM
Surr: BFB	99.8	15-244		%Rec	1	1/2/2024 11:29:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 11:29:32 AM
Toluene	ND	0.048		mg/Kg	1	1/2/2024 11:29:32 AM
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2024 11:29:32 AM
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2024 11:29:32 AM
Surr: 4-Bromofluorobenzene	97.5	39.1-146		%Rec	1	1/2/2024 11:29:32 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1500	60		mg/Kg	20	1/2/2024 9:22:23 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2312F03**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-12 8'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/20/2023 12:20:00 PM

Lab ID: 2312F03-002

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/1/2024 9:26:18 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/1/2024 9:26:18 PM
Surr: DNOP	94.2	69-147		%Rec	1	1/1/2024 9:26:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2024 11:53:13 AM
Surr: BFB	99.5	15-244		%Rec	1	1/2/2024 11:53:13 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 11:53:13 AM
Toluene	ND	0.048		mg/Kg	1	1/2/2024 11:53:13 AM
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2024 11:53:13 AM
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2024 11:53:13 AM
Surr: 4-Bromofluorobenzene	96.3	39.1-146		%Rec	1	1/2/2024 11:53:13 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	570	60		mg/Kg	20	1/2/2024 9:34:48 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2312F03**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-15 4'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/20/2023 12:45:00 PM

Lab ID: 2312F03-003

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/1/2024 9:36:46 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/1/2024 9:36:46 PM
Surr: DNOP	92.2	69-147		%Rec	1	1/1/2024 9:36:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2024 12:16:51 PM
Surr: BFB	97.6	15-244		%Rec	1	1/2/2024 12:16:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	1/2/2024 12:16:51 PM
Toluene	ND	0.049		mg/Kg	1	1/2/2024 12:16:51 PM
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2024 12:16:51 PM
Xylenes, Total	ND	0.099		mg/Kg	1	1/2/2024 12:16:51 PM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	1/2/2024 12:16:51 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	460	60		mg/Kg	20	1/2/2024 9:47:13 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2312F03**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-15 6'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/20/2023 12:55:00 PM

Lab ID: 2312F03-004

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/1/2024 9:47:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/1/2024 9:47:13 PM
Surr: DNOP	95.5	69-147		%Rec	1	1/1/2024 9:47:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2024 12:40:46 PM
Surr: BFB	102	15-244		%Rec	1	1/2/2024 12:40:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 12:40:46 PM
Toluene	ND	0.049		mg/Kg	1	1/2/2024 12:40:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2024 12:40:46 PM
Xylenes, Total	ND	0.097		mg/Kg	1	1/2/2024 12:40:46 PM
Surr: 4-Bromofluorobenzene	99.4	39.1-146		%Rec	1	1/2/2024 12:40:46 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	450	60		mg/Kg	20	1/2/2024 10:24:27 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2312F03**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-15 8'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/20/2023 1:05:00 PM

Lab ID: 2312F03-005

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/1/2024 9:57:48 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/1/2024 9:57:48 PM
Surr: DNOP	96.5	69-147		%Rec	1	1/1/2024 9:57:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/2/2024 1:04:40 PM
Surr: BFB	103	15-244		%Rec	1	1/2/2024 1:04:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	1/2/2024 1:04:40 PM
Toluene	ND	0.050		mg/Kg	1	1/2/2024 1:04:40 PM
Ethylbenzene	ND	0.050		mg/Kg	1	1/2/2024 1:04:40 PM
Xylenes, Total	ND	0.10		mg/Kg	1	1/2/2024 1:04:40 PM
Surr: 4-Bromofluorobenzene	98.6	39.1-146		%Rec	1	1/2/2024 1:04:40 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	470	60		mg/Kg	20	1/2/2024 10:36:52 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312F03

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: MB-79690	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 79690	RunNo: 102194								
Prep Date: 1/2/2024	Analysis Date: 1/2/2024	SeqNo: 3772697	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-79690	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 79690	RunNo: 102194								
Prep Date: 1/2/2024	Analysis Date: 1/2/2024	SeqNo: 3772698	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2312F03

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: 2312F03-005AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-15 8'	Batch ID: 79675	RunNo: 102162								
Prep Date: 1/1/2024	Analysis Date: 1/1/2024	SeqNo: 3771002	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.3	46.73	0	97.3	54.2	135			
Surr: DNOP	4.7		4.673		100	69	147			

Sample ID: 2312F03-005AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-15 8'	Batch ID: 79675	RunNo: 102162								
Prep Date: 1/1/2024	Analysis Date: 1/1/2024	SeqNo: 3771003	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	49.75	0	114	54.2	135	22.1	29.2	
Surr: DNOP	5.7		4.975		114	69	147	0	0	

Sample ID: LCS-79675	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 79675	RunNo: 102162								
Prep Date: 1/1/2024	Analysis Date: 1/1/2024	SeqNo: 3771005	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.4	61.9	130			
Surr: DNOP	4.9		5.000		98.0	69	147			

Sample ID: MB-79675	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 79675	RunNo: 102162								
Prep Date: 1/1/2024	Analysis Date: 1/1/2024	SeqNo: 3771008	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	11		10.00		107	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2312F03

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: ics-79669	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772357	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.4	70	130			
Surr: BFB	2000		1000		202	15	244			

Sample ID: mb-79669	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772358	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	990		1000		99.2	15	244			

Qualifiers:

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- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2312F03

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: LCS-79669	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772369	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	39.1	146			

Sample ID: mb-79669	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772370	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		94.8	39.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
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Environment Testin

Eurofins Environment Testing South Central, LLC
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 Work Order Number: 2312F03 RcptNo: 1

Received By: Tracy Casarrubias 12/29/2023 7:15:00 AM

Completed By: Tracy Casarrubias 12/29/2023 8:00:43 AM

Reviewed By: [Signature] 12-29-23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: [Signature] 12/29/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC- TMC 12/29/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.4, Good, Yes, Morty, ,

Chain-of-Custody Record

Client: Vertex / 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:
 Standard Rush 2 day

Project Name:
Rattlesnake Federal Unit #001

Project #:
23E-04815

Project Manager:
Kent Stallings

Sampler: Bryce Mortimer
On Ice: Yes No MORT

of Coolers: 1

Cooler Temp (including CF): 0.4 ± 0 = 0.4 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
12/20/23	12:00	Soil	BH23-12 6'	Yorjar	Ice	2312F03
	12:20		BH23-12 8'			001
	12:45		BH23-15 4'			002
	12:55		BH23-15 6'			003
	13:05		BH23-15 8'			004
						005

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/20/23	9:00	<u>Steph Mcelf</u>	<u>Chumma</u>		12/20/23	9:00
12/20/23	19:00	<u>Chumma</u>	<u>Chumma</u>		12/29/23	7:15

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Analysis Request	Analysis Request
<input checked="" type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input checked="" type="checkbox"/> Total Coliform (Present/Absent)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
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<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> 8270 (Semi-VOA)
<input type="checkbox"/> 8081 Pesticides/8082 PCB's	<input type="checkbox"/> 8260 (VOA)
<input type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input type="checkbox"/> 8270 (Semi-VOA)
<input checked="" type="checkbox"/> MTBE / TMBs (8021)	<input type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	



Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 08, 2024

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL:

FAX:

RE: Rattlesnake Federal Unit 001

OrderNo.: 2312F02

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 7 sample(s) on 12/29/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-17 6'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 3:15:00 PM

Lab ID: 2312F02-001

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/1/2024 8:01:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/1/2024 8:01:59 PM
Surr: DNOP	103	69-147		%Rec	1	1/1/2024 8:01:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2024 1:28:31 PM
Surr: BFB	101	15-244		%Rec	1	1/2/2024 1:28:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 1:28:31 PM
Toluene	ND	0.049		mg/Kg	1	1/2/2024 1:28:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2024 1:28:31 PM
Xylenes, Total	ND	0.097		mg/Kg	1	1/2/2024 1:28:31 PM
Surr: 4-Bromofluorobenzene	96.4	39.1-146		%Rec	1	1/2/2024 1:28:31 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1800	60		mg/Kg	20	1/2/2024 4:24:33 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-17 8'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 3:30:00 PM

Lab ID: 2312F02-002

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/1/2024 8:12:36 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/1/2024 8:12:36 PM
Surr: DNOP	107	69-147		%Rec	1	1/1/2024 8:12:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2024 1:52:20 PM
Surr: BFB	100	15-244		%Rec	1	1/2/2024 1:52:20 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 1:52:20 PM
Toluene	ND	0.049		mg/Kg	1	1/2/2024 1:52:20 PM
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2024 1:52:20 PM
Xylenes, Total	ND	0.098		mg/Kg	1	1/2/2024 1:52:20 PM
Surr: 4-Bromofluorobenzene	95.5	39.1-146		%Rec	1	1/2/2024 1:52:20 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	2100	60		mg/Kg	20	1/2/2024 4:36:58 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-18 6'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 2:15:00 PM

Lab ID: 2312F02-003

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/1/2024 8:23:11 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/1/2024 8:23:11 PM
Surr: DNOP	102	69-147		%Rec	1	1/1/2024 8:23:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2024 2:16:11 PM
Surr: BFB	99.6	15-244		%Rec	1	1/2/2024 2:16:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 2:16:11 PM
Toluene	ND	0.048		mg/Kg	1	1/2/2024 2:16:11 PM
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2024 2:16:11 PM
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2024 2:16:11 PM
Surr: 4-Bromofluorobenzene	96.4	39.1-146		%Rec	1	1/2/2024 2:16:11 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	170	60		mg/Kg	20	1/2/2024 4:49:22 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-27 0'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 9:35:00 AM

Lab ID: 2312F02-004

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/2/2024 10:46:24 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2024 10:46:24 AM
Surr: DNOP	110	69-147		%Rec	1	1/2/2024 10:46:24 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2024 2:40:02 PM
Surr: BFB	103	15-244		%Rec	1	1/2/2024 2:40:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	1/2/2024 2:40:02 PM
Toluene	ND	0.047		mg/Kg	1	1/2/2024 2:40:02 PM
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2024 2:40:02 PM
Xylenes, Total	ND	0.093		mg/Kg	1	1/2/2024 2:40:02 PM
Surr: 4-Bromofluorobenzene	99.1	39.1-146		%Rec	1	1/2/2024 2:40:02 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	67	60		mg/Kg	20	1/2/2024 8:32:45 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	Above Quantitation Range/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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-27 2'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 10:30:00 AM

Lab ID: 2312F02-005

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/1/2024 8:44:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/1/2024 8:44:18 PM
Surr: DNOP	97.4	69-147		%Rec	1	1/1/2024 8:44:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2024 3:03:53 PM
Surr: BFB	106	15-244		%Rec	1	1/2/2024 3:03:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 3:03:53 PM
Toluene	ND	0.047		mg/Kg	1	1/2/2024 3:03:53 PM
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2024 3:03:53 PM
Xylenes, Total	ND	0.095		mg/Kg	1	1/2/2024 3:03:53 PM
Surr: 4-Bromofluorobenzene	99.5	39.1-146		%Rec	1	1/2/2024 3:03:53 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	65	60		mg/Kg	20	1/2/2024 8:45:10 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-28 0'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 12:30:00 PM

Lab ID: 2312F02-006

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/1/2024 8:54:49 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/1/2024 8:54:49 PM
Surr: DNOP	97.3	69-147		%Rec	1	1/1/2024 8:54:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2024 5:03:09 PM
Surr: BFB	101	15-244		%Rec	1	1/2/2024 5:03:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	1/2/2024 5:03:09 PM
Toluene	ND	0.048		mg/Kg	1	1/2/2024 5:03:09 PM
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2024 5:03:09 PM
Xylenes, Total	ND	0.095		mg/Kg	1	1/2/2024 5:03:09 PM
Surr: 4-Bromofluorobenzene	94.7	39.1-146		%Rec	1	1/2/2024 5:03:09 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/2/2024 8:57:34 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2312F02**

Date Reported: **1/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-28 2'

Project: Rattlesnake Federal Unit 001

Collection Date: 12/21/2023 12:40:00 PM

Lab ID: 2312F02-007

Matrix: SOIL

Received Date: 12/29/2023 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/1/2024 9:05:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/1/2024 9:05:20 PM
Surr: DNOP	95.4	69-147		%Rec	1	1/1/2024 9:05:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2024 5:26:59 PM
Surr: BFB	97.1	15-244		%Rec	1	1/2/2024 5:26:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	1/2/2024 5:26:59 PM
Toluene	ND	0.049		mg/Kg	1	1/2/2024 5:26:59 PM
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2024 5:26:59 PM
Xylenes, Total	ND	0.098		mg/Kg	1	1/2/2024 5:26:59 PM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	1/2/2024 5:26:59 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/2/2024 9:09:59 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 Above Quantitation Range/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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312F02

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: MB-79684	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 79684	RunNo: 102194								
Prep Date: 1/2/2024	Analysis Date: 1/2/2024	SeqNo: 3772679	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-79684	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 79684	RunNo: 102194								
Prep Date: 1/2/2024	Analysis Date: 1/2/2024	SeqNo: 3772680	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.8	90	110			

Sample ID: MB-79690	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 79690	RunNo: 102194								
Prep Date: 1/2/2024	Analysis Date: 1/2/2024	SeqNo: 3772697	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-79690	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 79690	RunNo: 102194								
Prep Date: 1/2/2024	Analysis Date: 1/2/2024	SeqNo: 3772698	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2312F02

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: LCS-79675	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 79675		RunNo: 102162							
Prep Date: 1/1/2024	Analysis Date: 1/1/2024		SeqNo: 3771005		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.4	61.9	130			
Surr: DNOP	4.9		5.000		98.0	69	147			

Sample ID: MB-79675	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 79675		RunNo: 102162							
Prep Date: 1/1/2024	Analysis Date: 1/1/2024		SeqNo: 3771008		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	11		10.00		107	69	147			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2312F02

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: ics-79669	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772357	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.4	70	130			
Surr: BFB	2000		1000		202	15	244			

Sample ID: mb-79669	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772358	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	990		1000		99.2	15	244			

Sample ID: 2312f02-001ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-17 6'	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772488	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.41	0	86.0	70	130			
Surr: BFB	2000		976.6		205	15	244			

Sample ID: 2312f02-001amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-17 6'	Batch ID: 79669	RunNo: 102187								
Prep Date: 12/29/2023	Analysis Date: 1/2/2024	SeqNo: 3772489	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.39	0	90.4	70	130	4.85	20	
Surr: BFB	2000		975.6		202	15	244	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2312F02

08-Jan-24

Client: Vertex Resources Services, Inc.

Project: Rattlesnake Federal Unit 001

Sample ID: LCS-79669	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 79669		RunNo: 102187							
Prep Date: 12/29/2023	Analysis Date: 1/2/2024		SeqNo: 3772369		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	39.1	146			

Sample ID: mb-79669	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 79669		RunNo: 102187							
Prep Date: 12/29/2023	Analysis Date: 1/2/2024		SeqNo: 3772370		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		94.8	39.1	146			

Sample ID: 2312f02-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-17 8'	Batch ID: 79669		RunNo: 102187							
Prep Date: 12/29/2023	Analysis Date: 1/2/2024		SeqNo: 3772472		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9737	0	88.2	70	130			
Toluene	0.87	0.049	0.9737	0	89.6	70	130			
Ethylbenzene	0.89	0.049	0.9737	0	91.5	70	130			
Xylenes, Total	2.7	0.097	2.921	0	91.6	70	130			
Surr: 4-Bromofluorobenzene	0.90		0.9737		92.2	39.1	146			

Sample ID: 2312f02-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-17 8'	Batch ID: 79669		RunNo: 102187							
Prep Date: 12/29/2023	Analysis Date: 1/2/2024		SeqNo: 3772473		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9775	0	88.9	70	130	1.23	20	
Toluene	0.88	0.049	0.9775	0	90.3	70	130	1.17	20	
Ethylbenzene	0.88	0.049	0.9775	0	90.4	70	130	0.808	20	
Xylenes, Total	2.7	0.098	2.933	0	91.9	70	130	0.732	20	
Surr: 4-Bromofluorobenzene	0.91		0.9775		93.4	39.1	146	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



Environment Testin

Eurofins Environment Testing South Central, LLC
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 Work Order Number: 2312F02 RcptNo: 1
Received By: Tracy Casarrubias 12/29/2023 7:15:00 AM
Completed By: Tracy Casarrubias 12/29/2023 7:50:26 AM
Reviewed By: [Signature] 12-29-23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: [Signature] 12/29/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC- TMC 12/29/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.4, Good, Yes, Morty, [], []

Chain-of-Custody Record

Client: Vertex / 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:

Standard Rush 2 day

Project Name:

Rattlesnake Federal Unit #001

Project #:

23E-04815

Project Manager:

Kent Stallings

Sampler: Bryce Mortimer

On Ice: Yes No Marty

of Coolers: 1

Cooler Temp (including CF): 0.4 ± 0.4 (°C)

Container Type and #

Preservative Type

HEAL No.

4oz jar Ice

001

002

003

004

005

006

007

Date

Time

Matrix

Sample Name

12/21/23 15:15 Soil BH23-17 6'

15:30 BH23-17 8'

14:15 BH23-18 6'

9:35 BH23-27 0'

10:30 BH23-27 2'

12:30 BH23-28 0'

12:40 BH23-28 2'

Date:

Time:

Relinquished by:

Date:

Time:

Relinquished by:

12/20/23 8:00

Steph Mcelf

12/20/23 1:00

Curran

Received by:

Curran

Via:

Carrier

Date

Time

12/20/23 8:00

Date

Time

12/20/23 7:15

Remarks: Direct bill to: Devon

W/O #: 1005174603

cc. Kstallings@vertex.ca



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

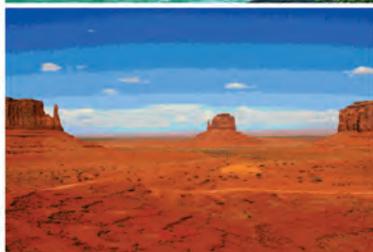
C, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Report to:
Chad Hensley



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name: Rattlesnake Federal Unit #001

Work Order: E412065

Job Number: 01058-0007

Received: 12/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
12/12/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 12/12/24



Chad Hensley
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Rattlesnake Federal Unit #001
Workorder: E412065
Date Received: 12/10/2024 7:00:00AM

Chad Hensley,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 12/10/2024 7:00:00AM, under the Project Name: Rattlesnake Federal Unit #001.

The analytical test results summarized in this report with the Project Name: Rattlesnake Federal Unit #001 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/24 12:51
--	--	------------------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BS24-10 @ 1'	E412065-01A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-9 @ 1'	E412065-02A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-8 @ 1'	E412065-03A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-7 @ 1'	E412065-04A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-6 @ 1'	E412065-05A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-5 @ 1'	E412065-06A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-4 @ 1'	E412065-07A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-3 @ 1'	E412065-08A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-2 @ 1'	E412065-09A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-1 @ 1'	E412065-10A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-11 @ 1'	E412065-11A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-12 @ 4.1'	E412065-12A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-13 @ 4.1'	E412065-13A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-14 @ 4.1'	E412065-14A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-15 @ 1'	E412065-15A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-16 @ 4.1'	E412065-16A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-17 @ 4.1'	E412065-17A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-18 @ 4.1'	E412065-18A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-19 @ 4.1'	E412065-19A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-20 @ 4.1'	E412065-20A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
--	--	------------------------------------

BS24-10 @ 1'
E412065-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		125 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		108 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		107 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	148	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
--	--	---

BS24-9 @ 1'

E412065-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		124 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		108 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		112 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	127	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
--	--	---

BS24-8 @ 1'

E412065-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		109 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		99.9 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	154	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-7 @ 1'

E412065-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		109 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		102 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	201	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-6 @ 1'

E412065-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		124 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		107 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		104 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	169	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-5 @ 1'

E412065-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		108 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		102 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	149	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-4 @ 1'

E412065-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		109 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		101 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	187	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-3 @ 1'

E412065-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		125 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		109 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		103 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	168	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-2 @ 1'

E412065-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		125 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		110 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		112 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	224	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-1 @ 1'

E412065-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		125 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		110 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		106 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	228	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-11 @ 1'

E412065-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		109 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		104 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	196	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-12 @ 4.1'

E412065-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		111 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		105 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	122	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-13 @ 4.1'

E412065-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		111 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		105 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	90.4	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-14 @ 4.1'

E412065-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		111 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		107 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	40.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-15 @ 1'

E412065-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		112 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		108 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	77.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-16 @ 4.1'

E412065-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		126 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		111 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		104 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-17 @ 4.1'

E412065-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		127 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		113 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		105 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-18 @ 4.1'

E412065-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		126 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		112 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		107 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-19 @ 4.1'

E412065-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		127 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		112 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		103 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	92.1	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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BS24-20 @ 4.1'

E412065-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		126 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450023
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		113 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450025
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		104 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2450030
Chloride	101	20.0	1	12/10/24	12/10/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450023-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	9.50		8.00		119	70-130			

LCS (2450023-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Benzene	4.45	0.0250	5.00		89.0	70-130			
Ethylbenzene	4.34	0.0250	5.00		86.8	70-130			
Toluene	4.41	0.0250	5.00		88.2	70-130			
o-Xylene	4.34	0.0250	5.00		86.8	70-130			
p,m-Xylene	8.86	0.0500	10.0		88.6	70-130			
Total Xylenes	13.2	0.0250	15.0		88.0	70-130			
Surrogate: 4-Bromochlorobenzene-PID	9.83		8.00		123	70-130			

Matrix Spike (2450023-MS1)

Source: E412065-05

Prepared: 12/10/24 Analyzed: 12/10/24

Benzene	4.33	0.0250	5.00	ND	86.6	54-133			
Ethylbenzene	4.21	0.0250	5.00	ND	84.1	61-133			
Toluene	4.28	0.0250	5.00	ND	85.7	61-130			
o-Xylene	4.22	0.0250	5.00	ND	84.5	63-131			
p,m-Xylene	8.59	0.0500	10.0	ND	85.9	63-131			
Total Xylenes	12.8	0.0250	15.0	ND	85.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	9.92		8.00		124	70-130			

Matrix Spike Dup (2450023-MSD1)

Source: E412065-05

Prepared: 12/10/24 Analyzed: 12/10/24

Benzene	4.36	0.0250	5.00	ND	87.2	54-133	0.700	20	
Ethylbenzene	4.25	0.0250	5.00	ND	85.0	61-133	1.07	20	
Toluene	4.32	0.0250	5.00	ND	86.5	61-130	0.915	20	
o-Xylene	4.25	0.0250	5.00	ND	85.1	63-131	0.692	20	
p,m-Xylene	8.68	0.0500	10.0	ND	86.8	63-131	1.09	20	
Total Xylenes	12.9	0.0250	15.0	ND	86.2	63-131	0.962	20	
Surrogate: 4-Bromochlorobenzene-PID	9.96		8.00		124	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2450023-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	ND	20.0						
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.56		8.00		107	70-130		

LCS (2450023-BS2)

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	40.2	20.0	50.0		80.5	70-130		
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.67		8.00		108	70-130		

Matrix Spike (2450023-MS2)

Source: E412065-05

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	40.8	20.0	50.0	ND	81.6	70-130		
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.67		8.00		108	70-130		

Matrix Spike Dup (2450023-MSD2)

Source: E412065-05

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	40.1	20.0	50.0	ND	80.1	70-130	1.76	20
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.73		8.00		109	70-130		



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AF

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450025-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.3		50.0		115	50-200			

LCS (2450025-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	256	25.0	250		102	38-132			
Surrogate: n-Nonane	52.7		50.0		105	50-200			

Matrix Spike (2450025-MS1)

Source: E412065-05

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	38-132			
Surrogate: n-Nonane	51.4		50.0		103	50-200			

Matrix Spike Dup (2450025-MSD1)

Source: E412065-05

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	282	25.0	250	ND	113	38-132	1.36	20	
Surrogate: n-Nonane	48.6		50.0		97.2	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:51:31PM
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Anions by EPA 300.0/9056A

Analyst: JM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450030-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	ND	20.0							
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LCS (2450030-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	249	20.0	250		99.6	90-110			
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LCS Dup (2450030-BSD1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	250	20.0	250		99.9	90-110	0.336	20	
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QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/24 12:51
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ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Invoice Information		Lab Use Only				TAT				State					
Company: Devon Energy Address: 5315 Buena Vista City, State, Zip: Carlsbad, NM, 88220 Phone: 575-689-7597 Email: Jim.Raley@dvn.com Miscellaneous:		Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX				
		E412065	01058-0057				x	x							
Analysis and Method												EPA Program			
												SDWA	CWA	RCRA	
												Compliance	Y	or	N
												PWSID #			
Sample Information															
No. of Containers	Sample ID	Field	Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TEEQ 1005 - TX	RCRA 8 Metals	Cation/Anion Pkg	Remarks	
1	BS24-10 ② 1'			1	x	x	x		x						
1	9			2	x	x	x		x						
1	8			3	x	x	x		x						
1	7			4	x	x	x		x						
1	6			5	x	x	x		x						
1	5			6	x	x	x		x						
1	4			7	x	x	x		x						
1	3			8	x	x	x		x						
1	2			9	x	x	x		x						
1	1			10	x	x	x		x						
E-01414 Jim Raley															
I certify the authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.															
Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days. Lab Use Only Received on ice: <input checked="" type="radio"/> Y / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>									
12-9-24	11:00	<i>[Signature]</i>		12-9-24	1145										
12-9-24	1630	<i>[Signature]</i>													
12-9-24	2230	<i>[Signature]</i>		12-9-24	1630										
Date	Time	Received by: (Signature)		Date	Time	Container Type: <u>g</u> - glass, <u>p</u> - poly/plastic, <u>ag</u> - amber glass, <u>v</u> - VOA									
12-9-24	7:00	<i>[Signature]</i>		12-10-24	7:00	Test results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.									



envirotech

Chain of Custody

Company: Devon Energy Address: 5315 Buena Vista City, State, Zip: Carlsbad, NM, 88220 Phone: 575-689-7597 Email: Jim.Raley@dvn.com Miscellaneous:		Lab WO# E 412005		Job Number 01058-0007		TAT 1D 2D 3D Std x				State NM CO UT TX x						
Analysis and Method												EPA Program				
DRO/DRO by 8015 GRO/DRO by 8015 BTEX by 8021 VOC by 8260 Chloride 300.0 BGDOC - NM TCEQ 1005 - TX RCRA 8 Metals Cation/Anion Pkg												SDWA CWA RCRA Compliance Y or N PWSID #				
Sample Information												Remarks				
No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	Cation/Anion Pkg	Remarks			
1	BS24-11 @ 1'		11	X	X	X		X								
1	BS24-12 @ 4.1'		12	X	X	X		X								
1	BS24-13 @ 4.1'		13	X	X	X		X								
1	BS24-14 @ 4.1'		14	X	X	X		X								
1	BS24-15 @ 1'		15	X	X	X		X								
1	BS24-16 @ 4.1'		16	X	X	X		X								
1	BS24-17 @ 4.1'		17	X	X	X		X								
1	BS24-18 @ 4.1'		18	X	X	X		X								
1	BS24-19 @ 4.1'		19	X	X	X		X								
1	BS24-20 @ 4.1'		20	X	X	X		X								

E-01414 Jim Raley

I certify the authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Date: 12-9-24 Time: 11:00 Received by: (Signature) <i>[Signature]</i>	Date: 12-9-24 Time: 11:45 Received by: (Signature) <i>[Signature]</i>	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on the day of collection. Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Date: 12-9-24 Time: 16:30 Received by: (Signature) <i>[Signature]</i>	Date: 12-9-24 Time: 16:30 Received by: (Signature) <i>[Signature]</i>	
Date: 12-9-24 Time: 9:23 Received by: (Signature) <i>[Signature]</i>	Date: 12-10-24 Time: 7:00 Received by: (Signature) <i>[Signature]</i>	
Date: _____ Time: _____ Received by: (Signature) _____	Date: _____ Time: _____ Received by: (Signature) _____	

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA
 Results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



Envirotech Analytical Laboratory

Printed: 12/10/2024 9:53:18AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	12/10/24 07:00	Work Order ID:	E412065
Phone:	(575) 748-0176	Date Logged In:	12/09/24 16:07	Logged In By:	Noe Soto
Email:	chensley@vertexresources.com	Due Date:	12/16/24 17:00 (4 day TAT)		

Chain of Custody (COC)

- 1. Does the sample ID match the COC? Yes
- 2. Does the number of samples per sampling site location match the COC? Yes
- 3. Were samples dropped off by client or carrier? Yes
- 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
- 5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this discussion.

Comments/Resolution

Project Rattlesnake Federal Unit #001 has been seprted into mutiple WOs due to high sample volume. WOs are E412065-E412068.

Sample Turn Around Time (TAT)

- 6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

- 7. Was a sample cooler received? Yes
- 8. If yes, was cooler received in good condition? Yes
- 9. Was the sample(s) received intact, i.e., not broken? Yes
- 10. Were custody/security seals present? No
- 11. If yes, were custody/security seals intact? NA
- 12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

- 13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

- 14. Are aqueous VOC samples present? No
- 15. Are VOC samples collected in VOA Vials? NA
- 16. Is the head space less than 6-8 mm (pea sized or less)? NA
- 17. Was a trip blank (TB) included for VOC analyses? NA
- 18. Are non-VOC samples collected in the correct containers? Yes
- 19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

- 20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

- 21. Does the COC or field labels indicate the samples were preserved? No
- 22. Are sample(s) correctly preserved? NA
- 24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

- 26. Does the sample have more than one phase, i.e., multiphase? No
- 27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

- 28. Are samples required to get sent to a subcontract laboratory? No
- 29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Chad Hensley



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name: Rattlesnake Federal Unit #001

Work Order: E412066

Job Number: 01058-0007

Received: 12/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
12/12/24

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc, holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.

Date Reported: 12/12/24



Chad Hensley
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Rattlesnake Federal Unit #001
Workorder: E412066
Date Received: 12/10/2024 7:00:00AM

Chad Hensley,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 12/10/2024 7:00:00AM, under the Project Name: Rattlesnake Federal Unit #001.

The analytical test results summarized in this report with the Project Name: Rattlesnake Federal Unit #001 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

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

Project Name: Rattlesnake Federal Unit #001
Project Number: 01058-0007
Project Manager: Chad Hensley

Reported:
12/12/24 12:55

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BS24-21 @ 4.1'	E412066-01A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-22 @ 4.1'	E412066-02A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-23 @ 4.1'	E412066-03A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-24 @ 4.1'	E412066-04A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-25 @ 4.1'	E412066-05A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-26 @ 4.1'	E412066-06A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-27 @ 4.1'	E412066-07A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-28 @ 4.1'	E412066-08A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-29 @ 4.1'	E412066-09A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-30 @ 4.1'	E412066-10A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-31 @ 4.1'	E412066-11A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-32 @ 4.1'	E412066-12A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-33 @ 4.1'	E412066-13A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-34 @ 4.1'	E412066-14A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-35 @ 4.1'	E412066-15A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-36 @ 4.1'	E412066-16A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-37 @ 4.1'	E412066-17A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-38 @ 4.1'	E412066-18A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-39 @ 4.1'	E412066-19A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-40 @ 4.1'	E412066-20A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-21 @ 4.1'

E412066-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		86.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.0 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		115 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-22 @ 4.1'

E412066-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		85.9 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		96.6 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		111 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	81.8	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-23 @ 4.1'

E412066-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		85.7 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		96.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		114 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	87.3	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-24 @ 4.1'

E412066-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		85.2 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		97.0 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		108 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-25 @ 4.1'

E412066-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		88.1 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		95.0 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		116 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	20.3	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-26 @ 4.1'

E412066-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		85.0 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		96.2 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		107 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	65.9	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-27 @ 4.1'

E412066-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		85.3 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		97.6 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		116 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	126	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-28 @ 4.1'

E412066-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		85.1 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.8 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		118 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	32.1	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-29 @ 4.1'

E412066-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		83.6 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		96.5 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		110 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	140	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-30 @ 4.1'

E412066-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		84.2 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.5 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		118 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	89.2	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-31 @ 4.1'

E412066-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		84.1 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		98.4 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		114 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	185	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-32 @ 4.1'

E412066-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		83.8 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		97.8 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>						
		112 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	72.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-33 @ 4.1'

E412066-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		83.5 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.8 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		111 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-34 @ 4.1'

E412066-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		83.3 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		96.9 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		111 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	189	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-35 @ 4.1'

E412066-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		83.0 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		97.4 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		112 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	245	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-36 @ 4.1'

E412066-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		83.5 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		98.2 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		112 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	89.3	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-37 @ 4.1'

E412066-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		83.2 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.2 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		111 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	135	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-38 @ 4.1'

E412066-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		83.0 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.6 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		116 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	62.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-39 @ 4.1'

E412066-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		83.8 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		97.9 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		113 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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BS24-40 @ 4.1'

E412066-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Benzene	ND	0.0250	1	12/10/24	12/12/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/12/24	
Toluene	ND	0.0250	1	12/10/24	12/12/24	
o-Xylene	ND	0.0250	1	12/10/24	12/12/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/12/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/12/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		82.3 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450027
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/12/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.4 %	70-130	12/10/24	12/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV		Batch: 2450035
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		111 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450033
Chloride	29.0	20.0	1	12/10/24	12/10/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
--	--	---

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450027-BLK1)

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	6.99		8.00		87.3	70-130			

LCS (2450027-BS1)

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	4.53	0.0250	5.00		90.7	70-130			
Ethylbenzene	4.44	0.0250	5.00		88.8	70-130			
Toluene	4.52	0.0250	5.00		90.4	70-130			
o-Xylene	4.44	0.0250	5.00		88.8	70-130			
p,m-Xylene	9.03	0.0500	10.0		90.3	70-130			
Total Xylenes	13.5	0.0250	15.0		89.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.03		8.00		87.9	70-130			

Matrix Spike (2450027-MS1)

Source: E412066-05

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	4.36	0.0250	5.00	ND	87.2	54-133			
Ethylbenzene	4.27	0.0250	5.00	ND	85.5	61-133			
Toluene	4.35	0.0250	5.00	ND	87.0	61-130			
o-Xylene	4.27	0.0250	5.00	ND	85.5	63-131			
p,m-Xylene	8.70	0.0500	10.0	ND	87.0	63-131			
Total Xylenes	13.0	0.0250	15.0	ND	86.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.02		8.00		87.7	70-130			

Matrix Spike Dup (2450027-MSD1)

Source: E412066-05

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	4.53	0.0250	5.00	ND	90.6	54-133	3.78	20	
Ethylbenzene	4.45	0.0250	5.00	ND	89.0	61-133	4.02	20	
Toluene	4.53	0.0250	5.00	ND	90.6	61-130	4.02	20	
o-Xylene	4.43	0.0250	5.00	ND	88.7	63-131	3.72	20	
p,m-Xylene	9.05	0.0500	10.0	ND	90.5	63-131	3.96	20	
Total Xylenes	13.5	0.0250	15.0	ND	89.9	63-131	3.88	20	
Surrogate: 4-Bromochlorobenzene-PID	6.89		8.00		86.2	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450027-BLK1)

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.69		8.00		96.2	70-130			

LCS (2450027-BS2)

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	43.6	20.0	50.0		87.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.84		8.00		98.0	70-130			

Matrix Spike (2450027-MS2)

Source: E412066-05

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	39.5	20.0	50.0	ND	79.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.68		8.00		96.0	70-130			

Matrix Spike Dup (2450027-MSD2)

Source: E412066-05

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	41.7	20.0	50.0	ND	83.5	70-130	5.42	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.81		8.00		97.6	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450035-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	55.6		50.0		111	50-200			

LCS (2450035-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	263	25.0	250		105	38-132			
Surrogate: n-Nonane	53.9		50.0		108	50-200			

Matrix Spike (2450035-MS1)

Source: E412066-10

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	263	25.0	250	ND	105	38-132			
Surrogate: n-Nonane	54.4		50.0		109	50-200			

Matrix Spike Dup (2450035-MSD1)

Source: E412066-10

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	275	25.0	250	ND	110	38-132	4.25	20	
Surrogate: n-Nonane	56.0		50.0		112	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:55:54PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450033-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	ND	20.0							
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LCS (2450033-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	256	20.0	250		103	90-110			
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LCS Dup (2450033-BSD1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	259	20.0	250		103	90-110	0.799	20	
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QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/24 12:55
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ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Company: Devon Energy Address: 5315 Buena Vista City, State, Zip: Carlsbad, NM, 88220 Phone: 575-689-7597 Email: Jim.Raley@dvn.com Miscellaneous:		Lab WO# E412066 Job Number 010580057		TAT 1D 2D 3D Std x				State NM CO UT TX x								
Sample Information		Analysis and Method								EPA Program						
No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCO 1005 - TX	RCRA 8 Metals	Cation/Anion Pkg	SDWA	CWA	RCRA	
													Compliance	Y	or	N
													PWSID #			
													Remarks			
1	BS24-21 @ 4.1'		1	X	X	X		X								
1	BS24-22 @ 4.1'		2	X	X	X		X								
1	BS24-23 @ 4.1'		3	X	X	X		X								
1	BS24-24 @ 4.1'		4	X	X	X		X								
1	BS24-25 @ 4.1'		5	X	X	X		X								
1	BS24-26 @ 4.1'		6	X	X	X		X								
1	BS24-27 @ 4.1'		7	X	X	X		X								
1	BS24-28 @ 4.1'		8	X	X	X		X								
1	BS24-29 @ 4.1'		9	X	X	X		X								
1	BS24-30 @ 4.1'		10	X	X	X		X								
E-01414 Jim Raley																
Authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																
Date	Time	Received by: (Signature)	Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on											
12-9-24	11:00	<i>[Signature]</i>	12-9-24	11:45	Lab Use Only											
12-9-24	16:30	<i>[Signature]</i>	12-9-24	16:30	Received on ice: <input checked="" type="checkbox"/> Y / N											
12-9-24	22:30	<i>[Signature]</i>	12-10-24	7:00	T1 _____ T2 _____ T3 _____											
					AVG Temp °C <u>4</u>											
A - Aqueous, O - Other			Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA													
Results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																



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Chain of Custody

Company: Devon Energy Address: 5315 Buena Vista City, State, Zip: Carlsbad, NM, 88220 Phone: 575-689-7597 Email: Jim.Raley@dvn.com Miscellaneous:		Lab WO# E41206 LAB1058-0051		Job Number		TAT 1D 2D 3D Std X			State NM CO UT TX X				
Analysis and Method										EPA Program			
										SDWA	CWA	RCRA	
										Compliance	Y	or	N
										PWSID #			
										Remarks			
Sample Information													
No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	PCDD/PCDF - TX	RCRA 8 Metals	Cation/Anion Pkg	
1	BS24-31 @ 4.1'		11	X	X	X		X					
1	BS24-32 @ 4.1'		12	X	X	X		X					
1	BS24-33 @ 4.1'		13	X	X	X		X					
1	BS24-34 @ 4.1'		14	X	X	X		X					
1	BS24-35 @ 4.1'		15	X	X	X		X					
1	BS24-36 @ 4.1'		16	X	X	X		X					
1	BS24-37 @ 4.1'		17	X	X	X		X					
1	BS24-38 @ 4.1'		18	X	X	X		X					
1	BS24-39 @ 4.1'		19	X	X	X		X					
1	BS24-40 @ 4.1'		20	X	X	X		X					
E-01414 Jim Raley													
Authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.													
Date	Time	Received by: (Signature)	Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on								
12-9-24	11:00	<i>Jim Raley</i>	12-9-24	11:45	Lab Use Only								
12-9-24	1630	<i>Chad M.</i>	12-9-24	1630	Received on ice: <input checked="" type="radio"/> Y / N								
12-9-24	2230	<i>Caitlin</i>	12-10-24	7:00	T1 _____ T2 _____ T3 _____								
								AVG Temp °C <u>4</u>					
A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA													
Results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.													



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Envirotech Analytical Laboratory

Printed: 12/10/2024 10:00:17AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Vertex Resource Services Inc. Date Received: 12/10/24 07:00 Work Order ID: E412066
Phone: (575) 748-0176 Date Logged In: 12/09/24 16:15 Logged In By: Noe Soto
Email: chensley@vertexresources.com Due Date: 12/16/24 17:00 (4 day TAT)

Chain of Custody (COC)

- 1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this discussion.

Sample Turn Around Time (TAT)

- 6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

- 7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

- 13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

- 14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

- 20. Were field sample labels filled out with the minimum information:
Sample ID? Yes
Date/Time Collected? Yes
Collectors name? No

Sample Preservation

- 21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

- 26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

- 28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Empty box for client instruction.

Comments/Resolution

Project Rattlesnake Federal Unit #001 has been seprted into mutiple WOs due to high sample volume. WOs are E412065-E412068.

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Chad Hensley



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name: Rattlesnake Federal Unit #001

Work Order: E412067

Job Number: 01058-0007

Received: 12/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
12/13/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc, holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.

Date Reported: 12/13/24



Chad Hensley
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Rattlesnake Federal Unit #001
Workorder: E412067
Date Received: 12/10/2024 7:00:00AM

Chad Hensley,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 12/10/2024 7:00:00AM, under the Project Name: Rattlesnake Federal Unit #001.

The analytical test results summarized in this report with the Project Name: Rattlesnake Federal Unit #001 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/24 08:51
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BS24-41 @ 4.1'	E412067-01A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-42 @ 4.1'	E412067-02A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-43 @ 4.1'	E412067-03A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-44 @ 4.1'	E412067-04A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-45 @ 4.1'	E412067-05A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-46 @ 4.1'	E412067-06A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-47 @ 4.1'	E412067-07A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-48 @ 4.1'	E412067-08A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-49 @ 4.1'	E412067-09A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-50 @ 4.1'	E412067-10A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-51 @ 4.1'	E412067-11A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-52 @ 4.1'	E412067-12A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-53 @ 4.1'	E412067-13A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-54 @ 3'	E412067-14A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-55 @ 3'	E412067-15A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-56 @ 3'	E412067-16A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-57 @ 3'	E412067-17A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-58 @ 3'	E412067-18A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
BS24-59 @ 3'	E412067-19A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
Backfill Material	E412067-20A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-41 @ 4.1'

E412067-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		93.9 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		93.9 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		121 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	79.5	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-42 @ 4.1'

E412067-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		98.6 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		98.6 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		116 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	106	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-43 @ 4.1'

E412067-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		95.7 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.4 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		95.7 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.4 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		120 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	121	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-44 @ 4.1'

E412067-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		94.3 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		94.3 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		118 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	106	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-45 @ 4.1'

E412067-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		95.9 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		95.9 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		120 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-46 @ 4.1'

E412067-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		93.9 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		93.9 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		114 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	79.1	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-47 @ 4.1'

E412067-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/10/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/10/24	
Toluene	ND	0.0250	1	12/10/24	12/10/24	
o-Xylene	ND	0.0250	1	12/10/24	12/10/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/10/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		92.5 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.6 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/10/24	
<i>Surrogate: Bromofluorobenzene</i>		92.5 %	70-130	12/10/24	12/10/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.6 %	70-130	12/10/24	12/10/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		116 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	56.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-48 @ 4.1'

E412067-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.3 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		106 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.3 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		106 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		120 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	91.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-49 @ 4.1'

E412067-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		92.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.0 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		92.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.0 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/10/24	
<i>Surrogate: n-Nonane</i>		127 %	50-200	12/10/24	12/10/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	246	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-50 @ 4.1'

E412067-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.0 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.5 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.0 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.5 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		103 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		110 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	83.3	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-51 @ 4.1'

E412067-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		95.4 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		95.4 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		112 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	181	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-52 @ 4.1'

E412067-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		95.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.7 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		95.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.7 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		115 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	38.9	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-53 @ 4.1'

E412067-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.8 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.8 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		123 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	87.5	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-54 @ 3'

E412067-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.6 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.6 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		117 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	209	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-55 @ 3'

E412067-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.2 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.2 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		121 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	158	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-56 @ 3'

E412067-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.5 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.2 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		94.5 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.2 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		121 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	94.2	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-57 @ 3'

E412067-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		92.8 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.9 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		92.8 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.9 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		119 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	129	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-58 @ 3'

E412067-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.0 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.0 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.1 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		119 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	23.0	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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BS24-59 @ 3'

E412067-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.3 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.4 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.3 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.4 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		115 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	ND	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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Backfill Material

E412067-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.6 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.7 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: BA		Batch: 2450037
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: Bromofluorobenzene</i>		93.6 %	70-130	12/10/24	12/11/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.7 %	70-130	12/10/24	12/11/24	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450036
Diesel Range Organics (C10-C28)	832	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	430	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		122 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450034
Chloride	136	20.0	1	12/10/24	12/10/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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Volatile Organic Compounds by EPA 8260B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450037-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.467		0.500		93.3		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.518		0.500		104		70-130		
Surrogate: Toluene-d8	0.514		0.500		103		70-130		

LCS (2450037-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Benzene	2.07	0.0250	2.50		82.8		70-130		
Ethylbenzene	2.25	0.0250	2.50		89.8		70-130		
Toluene	2.20	0.0250	2.50		88.1		70-130		
o-Xylene	2.32	0.0250	2.50		92.9		70-130		
p,m-Xylene	4.57	0.0500	5.00		91.4		70-130		
Total Xylenes	6.89	0.0250	7.50		91.9		70-130		
Surrogate: Bromofluorobenzene	0.475		0.500		95.0		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.541		0.500		108		70-130		
Surrogate: Toluene-d8	0.514		0.500		103		70-130		

Matrix Spike (2450037-MS1)

Source: E412067-06

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	2.17	0.0250	2.50	ND	86.7		48-131		
Ethylbenzene	2.27	0.0250	2.50	ND	90.8		45-135		
Toluene	2.22	0.0250	2.50	ND	88.7		48-130		
o-Xylene	2.41	0.0250	2.50	ND	96.4		43-135		
p,m-Xylene	4.71	0.0500	5.00	ND	94.2		43-135		
Total Xylenes	7.12	0.0250	7.50	ND	95.0		43-135		
Surrogate: Bromofluorobenzene	0.506		0.500		101		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.501		0.500		100		70-130		
Surrogate: Toluene-d8	0.508		0.500		102		70-130		

Matrix Spike Dup (2450037-MSD1)

Source: E412067-06

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	2.16	0.0250	2.50	ND	86.3		48-131	0.416	23
Ethylbenzene	2.29	0.0250	2.50	ND	91.6		45-135	0.921	27
Toluene	2.23	0.0250	2.50	ND	89.1		48-130	0.382	24
o-Xylene	2.44	0.0250	2.50	ND	97.7		43-135	1.34	27
p,m-Xylene	4.75	0.0500	5.00	ND	95.0		43-135	0.793	27
Total Xylenes	7.19	0.0250	7.50	ND	95.9		43-135	0.978	27
Surrogate: Bromofluorobenzene	0.509		0.500		102		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.544		0.500		109		70-130		
Surrogate: Toluene-d8	0.509		0.500		102		70-130		



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450037-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.467		0.500		93.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.518		0.500		104	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			

LCS (2450037-BS2)

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	51.5	20.0	50.0		103	70-130			
Surrogate: Bromofluorobenzene	0.487		0.500		97.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.523		0.500		105	70-130			
Surrogate: Toluene-d8	0.531		0.500		106	70-130			

Matrix Spike (2450037-MS2)

Source: E412067-06

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	53.6	20.0	50.0	ND	107	70-130			
Surrogate: Bromofluorobenzene	0.496		0.500		99.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.520		0.500		104	70-130			
Surrogate: Toluene-d8	0.526		0.500		105	70-130			

Matrix Spike Dup (2450037-MSD2)

Source: E412067-06

Prepared: 12/10/24 Analyzed: 12/10/24

Gasoline Range Organics (C6-C10)	52.3	20.0	50.0	ND	105	70-130	2.44	20	
Surrogate: Bromofluorobenzene	0.491		0.500		98.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.520		0.500		104	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AF

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450036-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: <i>n</i> -Nonane	58.1		50.0		116	50-200			

LCS (2450036-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	279	25.0	250		112	38-132			
Surrogate: <i>n</i> -Nonane	58.3		50.0		117	50-200			

Matrix Spike (2450036-MS1)

Source: E412067-01

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	310	25.0	250	ND	124	38-132			
Surrogate: <i>n</i> -Nonane	63.4		50.0		127	50-200			

Matrix Spike Dup (2450036-MSD1)

Source: E412067-01

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	292	25.0	250	ND	117	38-132	5.81	20	
Surrogate: <i>n</i> -Nonane	60.2		50.0		120	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/2024 8:51:13AM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450034-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	ND	20.0							
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LCS (2450034-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	251	20.0	250		100	90-110			
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LCS Dup (2450034-BSD1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	251	20.0	250		100	90-110	0.109	20	
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QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/13/24 08:51
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ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Chain of Custody

Company: Devon Energy Address: 5315 Buena Vista City, State, Zip: Carlsbad, NM, 88220 Phone: 575-689-7597 Email: Jim.Raley@dvn.com Miscellaneous:	Lab Use Only		TAT				State			
	Lab WO# E412067	Job Number 01058.0057	1D	2D	3D	Std	NM	CO	UT	TX

No. of Containers	Sample ID	Field	Filter	Lab Number	Analysis and Method								EPA Program			Remarks	
					DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCFQ 1005 - TX	RCRA 8 Metals	Cation/Anion Pkg	SDWA	CWA		RCRA
1	BS24-41 @ 4.1'			1	X	X	X	X									
1	BS24-42 @ 4.1'			2	X	X	X	X									
1	BS24-43 @ 4.1'			3	X	X	X	X									
1	BS24-44 @ 4.1'			4	X	X	X	X									
1	BS24-45 @ 4.1'			5	X	X	X	X									
1	BS24-46 @ 4.1'			6	X	X	X	X									
1	BS24-47 @ 4.1'			7	X	X	X	X									
1	BS24-48 @ 4.1'			8	X	X	X	X									
1	BS24-49 @ 4.1'			9	X	X	X	X									
1	BS24-50 @ 4.1'			10	X	X	X	X									

3E-01414 Jim Raley

Authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Date: 12-9-24 Time: 11:00 Received by: (Signature) <i>[Signature]</i>	Date: 12-9-24 Time: 11:45	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days Lab Use Only Received on ice: <input checked="" type="radio"/> Y / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Date: 12-9-24 Time: 1630 Received by: (Signature) <i>[Signature]</i>	Date: 12-9-24 Time: 1630	
Date: 12-9-24 Time: 2230 Received by: (Signature) <i>[Signature]</i>	Date: 12-10-24 Time: 7:00	
Date: _____ Time: _____ Received by: (Signature) _____	Date: _____ Time: _____	

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA
 After results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



Chain of Custody

Client Information		Invoice Information		Lab Use Only				TAT				State					
Company: Devon Energy		Address: 5315 Buena Vista		Lab WO#	Job Number			1D	2D	3D	Std	NM	CO	UT	TX		
City, State, Zip: Carlsbad, NM, 88220		Phone: 575-689-7597		E412007 0108-0007							x	x					
Email: Jim.Raley@dvn.com		Miscellaneous:		Analysis and Method								EPA Program					
				DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	Cation/Anion Pkg	SDWA	CWA	RCRA		
													Compliance	Y	or	N	
													PWSID #				
Sample Information		Sample ID		Field	Filter	Lab	Remarks										
No. of Containers						Number											
1		BS24-51 @ 4.1'				11	X	X	X	X							
1		BS24-52 @ 4.1'				12	X	X	X	X							
1		BS24-53 @ 4.1'				13	X	X	X	X							
1		BS24-54 @ 3'				14	X	X	X	X							
1		BS24-55 @ 3'				15	X	X	X	X							
1		BS24-56 @ 3'				16	X	X	X	X							
1		BS24-57 @ 3'				17	X	X	X	X							
1		BS24-58 @ 3'				18	X	X	X	X							
1		BS24-59 @ 3'				19	X	X	X	X							
1		Backfill Material				20	X	X	X	X							
23E-01414 Jim Raley																	
Authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																	
Date	Time	Received by: (Signature)				Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on									
12-9-24	11:00	<i>[Signature]</i>				12-9-24	11:45	Lab Use Only									
12-9-24	1630	<i>[Signature]</i>				12-9-24	1630	Received on ice: <input checked="" type="radio"/> Y / N									
12-9-24	2230	<i>[Signature]</i>				12-10-24	7:00	T1 _____ T2 _____ T3 _____									
		<i>[Signature]</i>						AVG Temp °C <u>4</u>									
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA																	
After results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																	



Envirotech Analytical Laboratory

Printed: 12/10/2024 10:08:39AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	12/10/24 07:00	Work Order ID:	E412067
Phone:	(575) 748-0176	Date Logged In:	12/09/24 16:15	Logged In By:	Noe Soto
Email:	chensley@vertexresources.com	Due Date:	12/16/24 17:00 (4 day TAT)		

Chain of Custody (COC)

- 1. Does the sample ID match the COC? Yes
- 2. Does the number of samples per sampling site location match the COC? Yes
- 3. Were samples dropped off by client or carrier? Yes
- 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
- 5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this discussion.

Comments/Resolution

Project Rattlesnake Federal Unit #001 has been seprted into mutiple WOs due to high sample volume. WOs are E412065-E412068.

Sample Turn Around Time (TAT)

- 6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

- 7. Was a sample cooler received? Yes
- 8. If yes, was cooler received in good condition? Yes
- 9. Was the sample(s) received intact, i.e., not broken? Yes
- 10. Were custody/security seals present? No
- 11. If yes, were custody/security seals intact? NA
- 12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

- 13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

- 14. Are aqueous VOC samples present? No
- 15. Are VOC samples collected in VOA Vials? NA
- 16. Is the head space less than 6-8 mm (pea sized or less)? NA
- 17. Was a trip blank (TB) included for VOC analyses? NA
- 18. Are non-VOC samples collected in the correct containers? Yes
- 19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

- 20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

- 21. Does the COC or field labels indicate the samples were preserved? No
- 22. Are sample(s) correctly preserved? NA
- 24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

- 26. Does the sample have more than one phase, i.e., multiphase? No
- 27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

- 28. Are samples required to get sent to a subcontract laboratory? No
- 29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Chad Hensley



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name: Rattlesnake Federal Unit #001

Work Order: E412068

Job Number: 01058-0007

Received: 12/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
12/12/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc, holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.

Date Reported: 12/12/24



Chad Hensley
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Rattlesnake Federal Unit #001
Workorder: E412068
Date Received: 12/10/2024 7:00:00AM

Chad Hensley,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 12/10/2024 7:00:00AM, under the Project Name: Rattlesnake Federal Unit #001.

The analytical test results summarized in this report with the Project Name: Rattlesnake Federal Unit #001 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/24 12:58
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WS24-01 @ 0-4.1'	E412068-01A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-02 @ 0-4.1'	E412068-02A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-03 @ 0-1'	E412068-03A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-04 @ 0-4.1'	E412068-04A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-05 @ 0-4.1'	E412068-05A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-06 @ 0-4.1'	E412068-06A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-07 @ 0-4.1'	E412068-07A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-08 @ 0-4.1'	E412068-08A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-09 @ 0-3'	E412068-09A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-10 @ 0-4.1'	E412068-10A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.
WS24-11 @ 0-4.1'	E412068-11A	Soil	12/05/24	12/10/24	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-01 @ 0-4.1'

E412068-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		82.8 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.1 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		112 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	108	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-02 @ 0-4.1'

E412068-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		82.5 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		107 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	83.4	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-03 @ 0-1'

E412068-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		84.1 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.6 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		115 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	44.7	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-04 @ 0-4.1'

E412068-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		81.9 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.7 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		120 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	78.3	20.0	1	12/10/24	12/10/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-05 @ 0-4.1'

E412068-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		81.4 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.7 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		117 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	163	20.0	1	12/10/24	12/11/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-06 @ 0-4.1'

E412068-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		82.0 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		98.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>						
		121 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	81.4	20.0	1	12/10/24	12/11/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-07 @ 0-4.1'

E412068-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		81.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		98.6 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		115 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	160	20.0	1	12/10/24	12/11/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-08 @ 0-4.1'

E412068-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		82.1 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.2 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		117 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	200	20.0	1	12/10/24	12/11/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-09 @ 0-3'

E412068-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		81.1 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.4 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		121 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	60.9	20.0	1	12/10/24	12/11/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-10 @ 0-4.1'

E412068-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		81.0 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.4 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		128 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	227	20.0	1	12/10/24	12/11/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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WS24-11 @ 0-4.1'

E412068-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Benzene	ND	0.0250	1	12/10/24	12/11/24	
Ethylbenzene	ND	0.0250	1	12/10/24	12/11/24	
Toluene	ND	0.0250	1	12/10/24	12/11/24	
o-Xylene	ND	0.0250	1	12/10/24	12/11/24	
p,m-Xylene	ND	0.0500	1	12/10/24	12/11/24	
Total Xylenes	ND	0.0250	1	12/10/24	12/11/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		82.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: SL		Batch: 2450038
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/24	12/11/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		99.3 %	70-130	12/10/24	12/11/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: AF		Batch: 2450043
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/24	12/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/24	12/11/24	
<i>Surrogate: n-Nonane</i>		130 %	50-200	12/10/24	12/11/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: DT		Batch: 2450040
Chloride	168	20.0	1	12/10/24	12/11/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450038-BLK1)

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	6.70		8.00		83.7	70-130			

LCS (2450038-BS1)

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	4.76	0.0250	5.00		95.2	70-130			
Ethylbenzene	4.59	0.0250	5.00		91.7	70-130			
Toluene	4.70	0.0250	5.00		94.0	70-130			
o-Xylene	4.57	0.0250	5.00		91.4	70-130			
p,m-Xylene	9.31	0.0500	10.0		93.1	70-130			
Total Xylenes	13.9	0.0250	15.0		92.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	6.76		8.00		84.5	70-130			

Matrix Spike (2450038-MS1)

Source: E412068-03

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	4.80	0.0250	5.00	ND	96.0	54-133			
Ethylbenzene	4.62	0.0250	5.00	ND	92.5	61-133			
Toluene	4.74	0.0250	5.00	ND	94.8	61-130			
o-Xylene	4.60	0.0250	5.00	ND	92.0	63-131			
p,m-Xylene	9.39	0.0500	10.0	ND	93.9	63-131			
Total Xylenes	14.0	0.0250	15.0	ND	93.3	63-131			
Surrogate: 4-Bromochlorobenzene-PID	6.68		8.00		83.5	70-130			

Matrix Spike Dup (2450038-MSD1)

Source: E412068-03

Prepared: 12/10/24 Analyzed: 12/11/24

Benzene	4.82	0.0250	5.00	ND	96.4	54-133	0.443	20	
Ethylbenzene	4.66	0.0250	5.00	ND	93.3	61-133	0.876	20	
Toluene	4.77	0.0250	5.00	ND	95.4	61-130	0.652	20	
o-Xylene	4.65	0.0250	5.00	ND	92.9	63-131	1.00	20	
p,m-Xylene	9.47	0.0500	10.0	ND	94.7	63-131	0.902	20	
Total Xylenes	14.1	0.0250	15.0	ND	94.1	63-131	0.936	20	
Surrogate: 4-Bromochlorobenzene-PID	6.70		8.00		83.7	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450038-BLK1)

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.75		8.00		96.8	70-130			

LCS (2450038-BS2)

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	42.0	20.0	50.0		84.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.94		8.00		99.2	70-130			

Matrix Spike (2450038-MS2)

Source: E412068-03

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	42.1	20.0	50.0	ND	84.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.91		8.00		98.9	70-130			

Matrix Spike Dup (2450038-MSD2)

Source: E412068-03

Prepared: 12/10/24 Analyzed: 12/11/24

Gasoline Range Organics (C6-C10)	42.3	20.0	50.0	ND	84.5	70-130	0.295	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.86		8.00		98.3	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AF

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450043-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: <i>n</i> -Nonane	55.3		50.0		111	50-200			

LCS (2450043-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	266	25.0	250		106	38-132			
Surrogate: <i>n</i> -Nonane	55.6		50.0		111	50-200			

Matrix Spike (2450043-MS1)

Source: E412068-08

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	286	25.0	250	ND	114	38-132			
Surrogate: <i>n</i> -Nonane	58.4		50.0		117	50-200			

Matrix Spike Dup (2450043-MSD1)

Source: E412068-08

Prepared: 12/10/24 Analyzed: 12/10/24

Diesel Range Organics (C10-C28)	294	25.0	250	ND	117	38-132	2.72	20	
Surrogate: <i>n</i> -Nonane	59.8		50.0		120	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/2024 12:58:08PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2450040-BLK1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	ND	20.0							
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LCS (2450040-BS1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	257	20.0	250		103	90-110			
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LCS Dup (2450040-BSD1)

Prepared: 12/10/24 Analyzed: 12/10/24

Chloride	257	20.0	250		103	90-110	0.232	20	
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QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Rattlesnake Federal Unit #001 Project Number: 01058-0007 Project Manager: Chad Hensley	Reported: 12/12/24 12:58
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ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Envirotech Analytical Laboratory

Printed: 12/10/2024 10:11:47AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	12/10/24 07:00	Work Order ID:	E412068
Phone:	(575) 748-0176	Date Logged In:	12/09/24 16:17	Logged In By:	Noe Soto
Email:	chensley@vertexresources.com	Due Date:	12/16/24 17:00 (4 day TAT)		

Chain of Custody (COC)

- 1. Does the sample ID match the COC? Yes
- 2. Does the number of samples per sampling site location match the COC? Yes
- 3. Were samples dropped off by client or carrier? Yes
- 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
- 5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this discussion.

Sample Turn Around Time (TAT)

- 6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

- 7. Was a sample cooler received? Yes
- 8. If yes, was cooler received in good condition? Yes
- 9. Was the sample(s) received intact, i.e., not broken? Yes
- 10. Were custody/security seals present? No
- 11. If yes, were custody/security seals intact? NA
- 12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

- 13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

- 14. Are aqueous VOC samples present? No
- 15. Are VOC samples collected in VOA Vials? NA
- 16. Is the head space less than 6-8 mm (pea sized or less)? NA
- 17. Was a trip blank (TB) included for VOC analyses? NA
- 18. Are non-VOC samples collected in the correct containers? Yes
- 19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

- 20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

- 21. Does the COC or field labels indicate the samples were preserved? No
- 22. Are sample(s) correctly preserved? NA
- 24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

- 26. Does the sample have more than one phase, i.e., multiphase? No
- 27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

- 28. Are samples required to get sent to a subcontract laboratory? No
- 29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Comments/Resolution

Project Rattlesnake Federal Unit #001 has been seprted into mutiple WOs due to high sample volume. WOs are E412065-E412068.

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

January 22, 2025

SALLY CARTTAR
VERTEX RESOURCE
3101 BOYD DRIVE
CARLSBAD, NM 88220

RE: RATTLESNAKE FEDERAL UNIT 001 H

Enclosed are the results of analyses for samples received by the laboratory on 01/16/25 13:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

VERTEX RESOURCE
 SALLY CARTTAR
 3101 BOYD DRIVE
 CARLSBAD NM, 88220
 Fax To: NA

Received:	01/16/2025	Sampling Date:	01/14/2025
Reported:	01/22/2025	Sampling Type:	Soil
Project Name:	RATTLESNAKE FEDERAL UNIT 001 H	Sampling Condition:	Cool & Intact
Project Number:	24E - 04918	Sample Received By:	Alyssa Parras
Project Location:	NONE GIVEN		

Sample ID: BACKFILL - 2 (H250259-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/20/2025	ND	2.08	104	2.00	3.90	
Toluene*	<0.050	0.050	01/20/2025	ND	2.18	109	2.00	7.32	
Ethylbenzene*	<0.050	0.050	01/20/2025	ND	2.46	123	2.00	8.06	
Total Xylenes*	<0.150	0.150	01/20/2025	ND	7.69	128	6.00	8.38	
Total BTEX	<0.300	0.300	01/20/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 128 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	01/21/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/20/2025	ND	216	108	200	1.07	
DRO >C10-C28*	<10.0	10.0	01/20/2025	ND	187	93.7	200	3.74	
EXT DRO >C28-C36	<10.0	10.0	01/20/2025	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.2 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- S-05 The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
- BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vortex CBill to Devon Project Manager: Sally Carttar Address: 3101 Boyd Dr. City: Carltsbad State: NM zip: 88222 Phone #: 575-361-3561 Fax #: _____ Project #: 24E-04918 Project Owner: _____ Project Name: Rattlesnake Federal unit 001 H Project Location: _____ Sampler Name: Riley Arnold FOR LAB USE ONLY		P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Lab I.D. H250 859 Sample I.D. Backfill - 2		(G)RAB OR (C)OMP. <input checked="" type="checkbox"/> # CONTAINERS _____ GROUNDWATER _____ WASTEWATER _____ SOIL <input checked="" type="checkbox"/> OIL _____ SLUDGE _____ OTHER: _____ ACID/BASE: _____ ICE / COOL <input checked="" type="checkbox"/> OTHER: _____	
Date: 1/16 Time: 11:02 Date: 1/10/25 Time: 1339		RECEIVED BY: APD CHECKED BY: APD	
Relinquished By: CS Received By: _____		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____ All Results are emailed. Please provide Email address: _____ REMARKS: Scatterd vester@resource.com	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____ Observed Temp. °C 0.12 Corrected Temp. °C 0.42		Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C _____ Corrected Temp. °C _____	

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

APPENDIX E – Sampling Notification Variance Correspondence



Outlook

RE: [EXTERNAL] Variance Request - nKJ1600727914, nOY1711838821 Sampling Notification

From Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>

Date Thu 3/13/2025 7:34 AM

To Sally Carttar <SCarttar@vertexresource.com>

Cc Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>

Caution: This email is from an external sender. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Sally,

The variance for the 2-business day notification on confirmation samples collected for release numbers **nKJ1600727914** and **nOY1711838821** at the Rattlesnake Federal Unit #001 is approved. I will put a note in "Incident Events" explaining the miscommunication on the wrong incident number. Meanwhile, please complete the notifications on the correct incident numbers.

Regards,

Robert Hamlet • Environmental Specialist - Advanced

Environmental Bureau

EMNRD - Oil Conservation Division

506 W. Texas Ave. | Artesia, NM 88210

575.909.0302 | robert.hamlet@emnrd.nm.gov

<http://www.emnrd.state.nm.us/OCD/>



From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>

Sent: Wednesday, March 12, 2025 4:47 PM

To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>

Subject: FW: [EXTERNAL] Variance Request - nKJ1600727914, nOY1711838821 Sampling Notification

From: Sally Carttar <SCarttar@vertexresource.com>

Sent: Wednesday, March 12, 2025 3:25 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Cc: Raley, Jim <Jim.Raley@dvn.com>; Kent Stallings <kstallings@vertexresource.com>

Subject: [EXTERNAL] Variance Request - nKJ1600727914, nOY1711838821 Sampling Notification

You don't often get email from scarttar@vertexresource.com. [Learn why this is important](#)

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

To whom it may concern,

Vertex is requesting a notification variance for confirmation samples collected for release numbers **nKJ1600727914 and nOY1711838821** at the Rattlesnake Federal Unit #001.

Due to human error, the sampling notification (Submission ID [407772](#)) was submitted under an incorrect incident number. However, all other details—including sampling location driving directions and coordinates—were entered correctly and directed observers to the Rattlesnake Federal Unit #001.

For reference, I have attached the original email from December requesting the notification. Details of the sampling event can be found on the [notification page](#) on the OCD website.

Best regards,

Sally Carttar

Project Manager

Vertex Resource Services Inc.

3101 Boyd Drive,

Carlsbad, NM 88220

C 575.361.3561

www.vertex.ca

[webpage]Connect with LinkedIn

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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 442302

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442302
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nOY1711838821
Incident Name	NOY1711838821 RATTLESNAKE FEDERAL UNIT #001 @ 30-025-36928
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-36928] RATTLESNAKE FEDERAL UNIT #001

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	RATTLESNAKE FEDERAL UNIT #001
Date Release Discovered	04/06/2017
Surface Owner	Federal

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Oil 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	
<i>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.</i>	
Crude Oil Released (bbls) Details	Cause: Corrosion Production Tank Crude Oil Released: 20 BBL Recovered: 0 BBL Lost: 20 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.
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)	Not answered.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 2

Action 442302

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442302
	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)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>

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	<i>Not answered.</i>

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: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 03/13/2025
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State of New Mexico
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Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 3

Action 442302

QUESTIONS (continued)

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	Action Number: 442302
	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 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
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	Between 1 and 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	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 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	Between 1 and 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
<i>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.</i>	
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)	4600
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	880
GRO+DRO (EPA SW-846 Method 8015M)	370
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	11/22/2024
On what date will (or did) the final sampling or liner inspection occur	12/05/2024
On what date will (or was) the remediation complete(d)	12/05/2024
What is the estimated surface area (in square feet) that will be reclaimed	11457
What is the estimated volume (in cubic yards) that will be reclaimed	1392
What is the estimated surface area (in square feet) that will be remediated	11457
What is the estimated volume (in cubic yards) that will be remediated	1392

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, Page 4

Action 442302

QUESTIONS (continued)

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	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	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
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: James Raley Title: EHS Professional Email: jim.raley@dmv.com Date: 03/13/2025
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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, Page 5

Action 442302

QUESTIONS (continued)

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	Action Number: 442302
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
<i>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.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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Action 442302

QUESTIONS (continued)

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	Action Number: 442302
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	442285
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	12/05/2024
What was the (estimated) number of samples that were to be gathered	69
What was the sampling surface area in square feet	10445

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
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	0
What was the total volume (cubic yards) remediated	0
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	11457
What was the total volume (in cubic yards) reclaimed	1392
Summarize any additional remediation activities not included by answers (above)	Remediation complete.

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: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 03/13/2025
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Action 442302

QUESTIONS (continued)

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QUESTIONS

Reclamation Report	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 442302

CONDITIONS

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NOY1711838821 RATTLESNAKE FEDERAL UNIT #001, thank you. This Remediation Closure Report is approved.	5/9/2025