

<b>Location:</b>	<b>Brushy Draw 30-31 Fed Battery</b>	
<b>Spill Date:</b>	<b>11/10/2024</b>	
<b>Area 1</b>		
Approximate Area =	17500.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.26	
<b>VOLUME OF LEAK</b>		
Total Crude Oil =	27.00	bbls
Total Produced Water =	108.00	bbls
<b>TOTAL VOLUME OF LEAK</b>		
Total Crude Oil =	27.00	bbls
Total Produced Water =	108.00	bbls
<b>TOTAL VOLUME RECOVERED</b>		
Total Crude Oil =	1.50	bbls
Total Produced Water =	1.50	bbls



Incident Number: NAPP2431846528

## Incident Closure

### Brushy Draw 30 – 31 Federal Battery

Section 31, Township 25 South, Range 30 East

Facility ID: fAPP2207332396

Latitude & Longitude: 32.09137, -103.91807

County: Eddy

Vertex File Number: 24E-04918

**Prepared for:**

ExxonMobil Upstream Company

**Prepared by:**

Vertex Resource Services Inc.

**Date:**

March 2025

**ExxonMobil Upstream Company**  
Brushy Draw 30 – 31 Federal Battery

**Incident Closure**  
March 2025

---

**Incident Closure**

**Brushy Draw 30 – 31 Federal Battery**  
**Section 31, Township 25 South, Range 30 East**  
**Facility ID: fAPP2207332396**  
**Latitude & Longitude: 32.09137, -103.91807**  
**County: Eddy**

Prepared for:

**ExxonMobil Upstream Company**  
3104 East Greene Street  
Carlsbad, New Mexico 88220

**New Mexico Oil Conservation Division**  
508 West Texas Avenue  
Artesia, New Mexico 88210

Prepared by:

**Vertex Resource Services Inc.**  
3101 Boyd Drive  
Carlsbad, New Mexico 88220



---

Chad Hensley, B. Sc. GCNR  
SENIOR PROJECT MANAGER, REPORT REVIEW

3/6/2025

---

Date

ExxonMobil Upstream Company  
Brushy Draw 30 – 31 Federal Battery

Incident Closure  
March 2025

---

## Table of Contents

1.0	Introduction .....	1
2.0	Incident Description .....	1
3.0	Site Characteristics .....	1
4.0	Closure Criteria Determination .....	2
5.0	Remedial Actions Taken.....	4
6.0	Closure Request.....	4
7.0	References .....	6
8.0	Limitations .....	7

### **In-text Tables**

- Table 1. Closure Criteria Determination
- Table 2. Closure Criteria for Soils Impacted by a Release

### **List of Figures**

- Figure 1. Characterization Sampling Site Schematic
- Figure 2. Confirmatory Sample Site Schematic

### **List of Tables**

- Table 3. Initial Characterization Sample and Laboratory Results – Depth to Groundwater <50 feet bgs
- Table 4. Confirmation Sample and Laboratory Results – Depth to Groundwater <50 feet bgs

### **List of Appendices**

- Appendix A. Closure Criteria Research Documentation
- Appendix B. Daily Field and Sampling Report(s)
- Appendix C. Laboratory Data Report(s) and Chain of Custody Form(s)
- Appendix D. Notification

## 1.0 Introduction

ExxonMobil Upstream Company (Exxon) retained Vertex Resource Services Inc. (Vertex) to conduct an Incident Closure for a crude oil and produced water release that occurred on November 10, 2024, at Brushy Draw 30 -31 Federal Battery facility ID fAPP2207332396 (hereafter referred to as the “site”). Exxon submitted an initial C-141 Release Notification to New Mexico Oil Conservation Division (NMOCD) on November 25, 2024. Incident ID number NAPP2431846528 was assigned to this incident.

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

## 2.0 Incident Description

The release occurred on November 10, 2024, due to corrosion. The incident was reported on November 13, 2024, and involved the release of approximately 27 barrels (bbl.) of crude oil and approximately 108 (bbl.) of produced water both on the pad site and off the pad site. Approximately 4 bbl. of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

## 3.0 Site Characteristics

The site is located approximately 29 miles southeast of Carlsbad, New Mexico (Google Inc. 2025). The legal location for the site is Section 31, Township 25 South and Range 30 East in Eddy County, New Mexico. The release area is located on Bureau of Land Management property. An aerial photograph and site schematic are presented on Figure 1.

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

*The Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2025) indicates the site’s surface geology primarily comprises Qep - Eolian and piedmont deposits (New Mexico Bureau of Geology and Mineral Resources, 2025). The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018). The surrounding landscape is associated with plains and fan piedmonts with elevations ranging between 2,000 and 5,700 feet. The climate is semiarid with average annual precipitation ranging between 5 and 15 inches. Predominant soil textures around the site are well-drained fine sands and fine sandy loams with low runoff potential (United States Department of Agriculture, Natural Resources Conservation Service, 2025). Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses interspersed with shrubs and half-shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2025). Limited to no vegetation is allowed to grow on the compacted facility pad

#### **4.0 Closure Criteria Determination**

The nearest active well to the site is an industrial and prospecting development well 1.95 miles to the south. There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 722 feet northwest of the site (United States Fish and Wildlife Service, 2025). 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

The nearest depth to groundwater reference to the site is an exploratory well advanced 1.57 miles to the east on January 17, 2015. Depth to groundwater at the well was 277 feet below ground surface (bgs; New Mexico Office of the State Engineer, 2025b). Information pertaining to the depth to ground water determination is included in Appendix A.

**ExxonMobil Upstream Company**  
 Brushy Draw 30 – 31 Federal Battery

**Incident Closure**  
 March 2025

<b>Table 1. Closure Criteria Determination</b>			
<b>Site Name: Brushy Draw 30-31 Federal Battery</b>			
<b>Release Coordinates: 32.091537,-103.918753</b>		<b>X: 602031</b>	<b>Y: 3551093</b>
<b>Site Specific Conditions</b>		<b>Value</b>	<b>Unit</b>
1	Depth to Groundwater (nearest reference)	100-500 ft	
	Distance between release and nearest DTGW reference	<b>1 - 5 mi</b>	
	Date of nearest DTGW reference measurement	<b>January 17, 2015</b>	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	500 - 1000 ft	
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	1 - 5 mi	
4	Within 300 feet from an occupied residence, school, hospital, institution or church	5mi <	
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, <b>or</b>	1 - 5 mi	
	ii) Within 1000 feet of any fresh water well or spring	1 - 5 mi	
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	1 - 5 mi	
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	5mi <	
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	1 - 5 mi	
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	500 - 1000 ft	
11	Soil Type	Fine sand, sandy clay loam	
12	Ecological Classification	Loamy sand	
13	Geology	Eolian and peidmont deposits	
	<b>NMAC 19.15.29.12 E (Table 1) Closure Criteria</b>	<50'	<50' 51-100' >100'

The depth to groundwater reference exceeded 0.5 miles from the release area; therefore, the closure criteria for remediation and reclamation of the site was determined to be associated with the strictest constituent concentration limits as presented in Table 2.

<b>Table 2. Closure Criteria for Soils Impacted by a Release</b>		
<b>Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS</b>	<b>Constituent</b>	<b>Limit</b>
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids

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

BTEX – benzene, toluene, ethylbenzene and xylenes

### 5.0 Remedial Actions Taken

An initial site inspection of the release area was completed on November 25, 2024, which identified the area of the release specified in the initial C-141 Report. The impacted area was determined to be approximately 10,838 squarefeet. The Daily Field Report (DFR) associated with the site inspection is included in Appendix B.

Remediation efforts began on January 22, 2025, and were finalized on February 21, 2025. Vertex personnel supervised the excavation of impacted soils. Soils were removed to a depth of 6 inches to 6 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility as stipulated by the Form C-138 Request for Approval to Accept Solid Waste. Field screening results and DFRs documenting various phases of the remediation are presented in Appendix B.

Notification that confirmatory samples were being collected was provided to the NMOCD on February 13, 2025. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 102 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Cardinal Labs 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 C. All confirmatory samples collected and analyzed were below closure criteria for the site.

### 6.0 Closure Request

The release area was fully delineated, remediated, and backfilled with local soil by March 3, 2025. 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 location “under 50 feet to groundwater”. Based on these findings, Exxon requests that this release be closed.

**ExxonMobil Upstream Company**  
Brushy Draw 30 – 31 Federal Battery

**Incident Closure**  
March 2025

---

Should you have any questions or concerns, please do not hesitate to contact Chad Hensley at 575-200-6167 or [Chensley@vertexresource.com](mailto:Chensley@vertexresource.com).

## 7.0 References

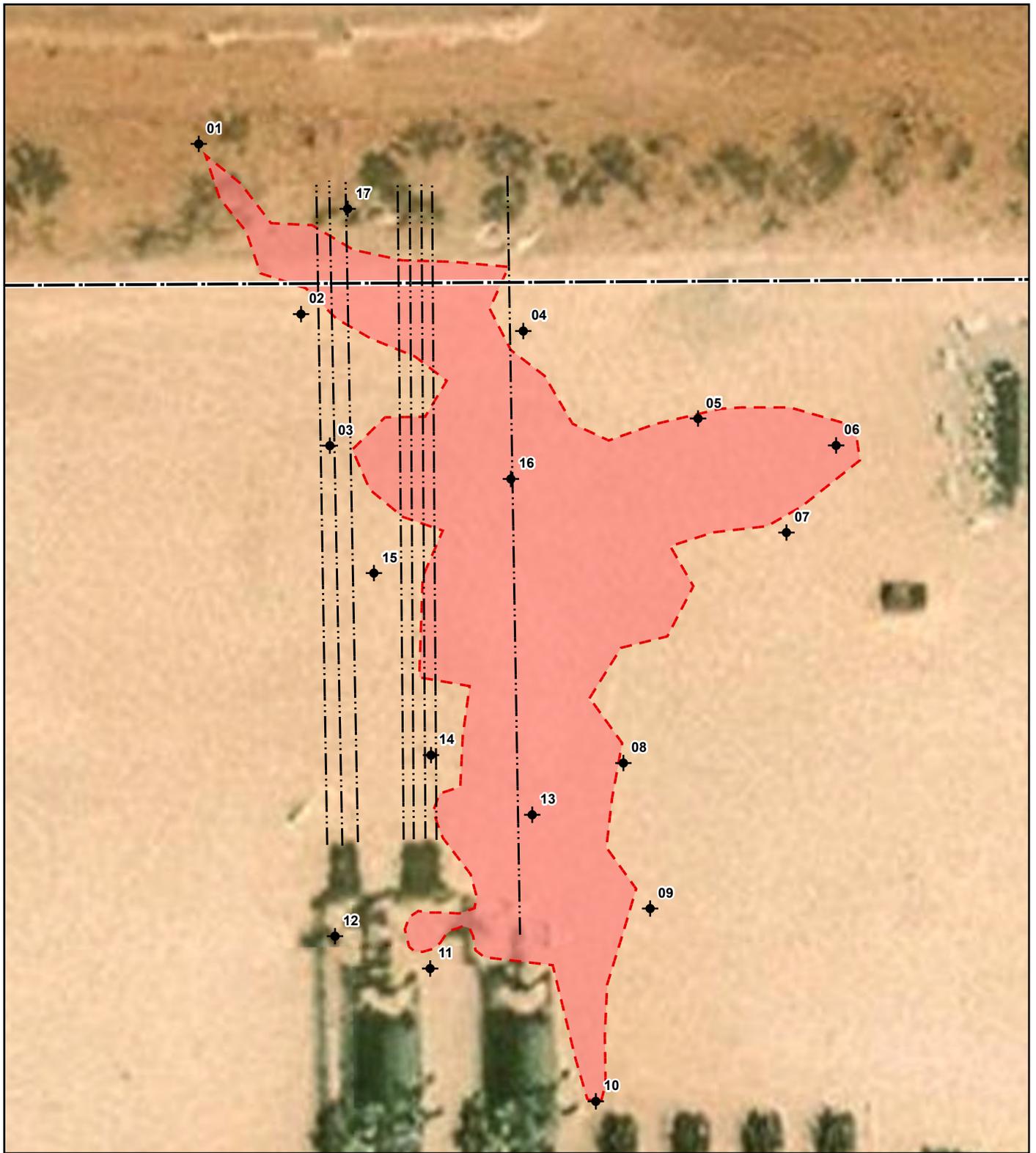
- Google Inc. (2025). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from <https://earth.google.com>
- New Mexico Bureau of Geology and Mineral Resources. (2025). *Interactive Geologic Map*. Retrieved from <https://maps.nmt.edu/>
- New Mexico Department of Surface Water Quality Bureau. (2025). *Assessed and Impaired Waters of New Mexico*. Retrieved from <https://gis.web.env.nm.gov/oem/?map=swqb>
- New Mexico Energy, Minerals and Natural Resources Department. (2025). *OCD Permitting - Spill Search*. Retrieved from <https://wwwapps.emnrd.nm.gov/oed/oedpermitting/Data/Spills/Spills.aspx>
- New Mexico Mining and Minerals Division. (2025). *Coal Mine Resources in New Mexico*. Retrieved from <https://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=5f80f3b0faa545e58fe747cc7b037a93>
- New Mexico Office of the State Engineer. (2025a). *Point of Diversion Location Report - New Mexico Water Rights Reporting System*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/wellSurfaceDiversion.html>
- New Mexico Office of the State Engineer. (2025b). *Water Column/Average Depth to Water Report - New Mexico Water Rights Reporting System*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html>
- New Mexico Office of the State Engineer. (2025c). *Well Log/Meter Information Report - New Mexico Water Rights Reporting System*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/meterReport.html>
- New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.
- United States Department of Agriculture, Natural Resources Conservation Service. (2025). *Web Soil Survey*. Retrieved from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
- United States Department of Homeland Security, Federal Emergency Management Agency. (2025). *FEMA Flood Map Service: Search by Address*. Retrieved from <https://msc.fema.gov/portal/search?AddressQuery=malaga%20new%20mexico#searchresultsanchor>
- United States Department of the Interior, Bureau of Land Management. (2018). *New Mexico Cave/Karst*. Retrieved from [https://www.nm.blm.gov/shapeFiles/cfo/carlsbad\\_spatial\\_data.html](https://www.nm.blm.gov/shapeFiles/cfo/carlsbad_spatial_data.html)
- United States Geological Survey. (2025). *National Water Information System: Web Interface*. Retrieved from <https://waterdata.usgs.gov/nwis>
- United States Fish and Wildlife Service. (2025). *National Wetland Inventory - Surface Waters and Wetlands*. Retrieved from <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>

## **8.0 Limitations**

This report has been prepared for the sole benefit of ExxonMobil Upstream Company. 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 ExxonMobil Upstream Company. 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 "BH24-")
- Pipeline (Underground)
- ▭ Release Area (~10,838 sq.ft.)
- ▭ Approximate Lease Boundary



0 5 10 20 ft  
 Map Center:  
 Lat: 32.092135°N,  
 Long: 103.918843°W  
 NAD 1983 UTM Zone 13N  
 Date: Dec 12/24



**Characterization Sampling Site Schematic  
 Brushy Draw 30-31 Federal Battery**

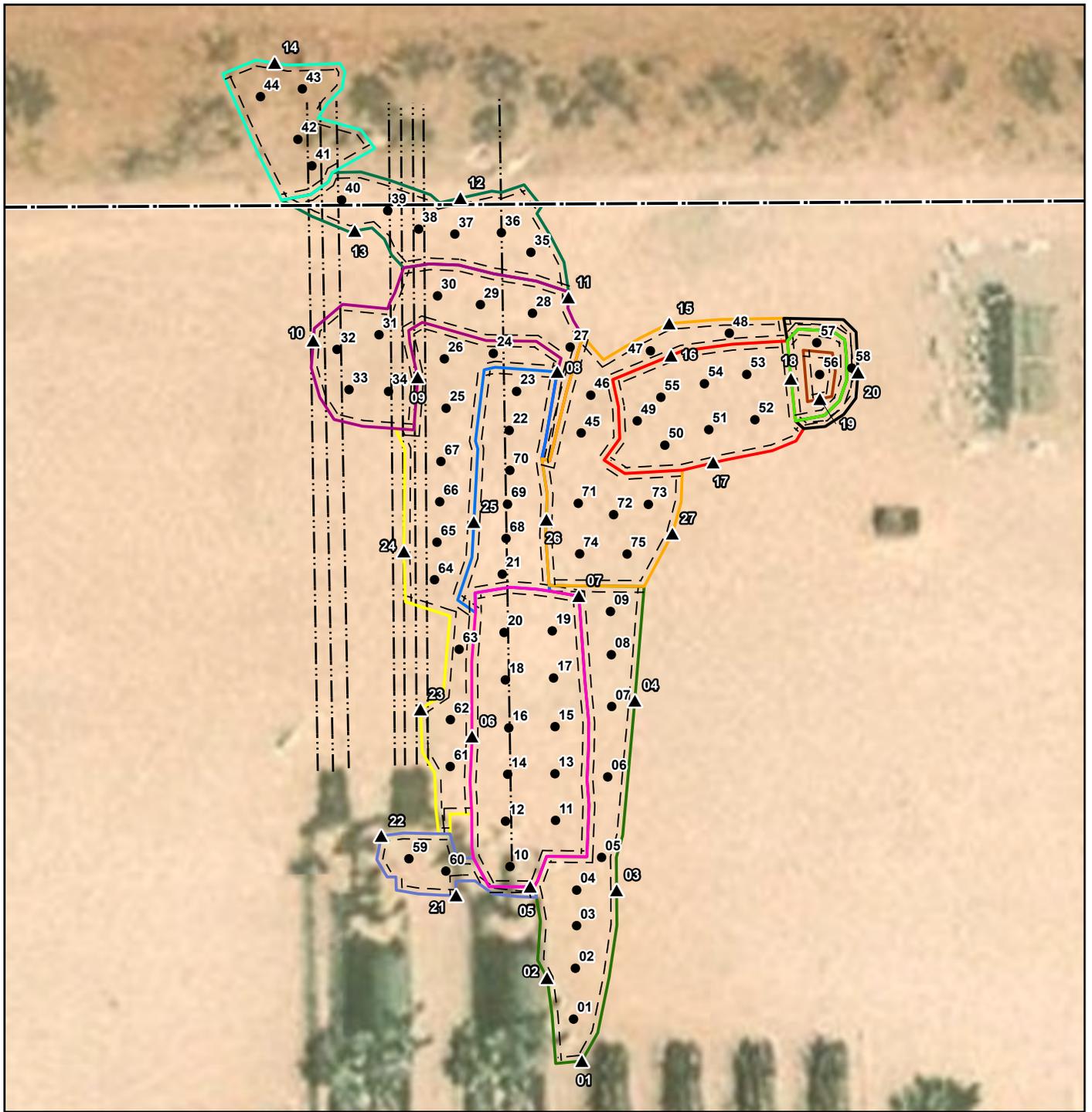
FIGURE:  
**1**



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, 2024. Approximate lease boundary from imagery by Vertex Professional Services Ltd. (VPS), 2024. Site features from GPS by VPS, 2024.

Document Path: S:\04 - Geomatics\1-Projects\US PROJECTS\XTO Energy\2024\24E-04918 - Brushy Draw 30-31 Fed Battery\Project\24E-04918.aprx



- Base Sample (Prefixed by "BS25-")
- ▲ Wall Sample (Prefixed by "WS25-")
- - - Pipeline (Underground)
- ▭ Approximate Lease Boundary
- ▭ East Excavation to 1.5' bgs (~148 sq.ft. | 107 ft.)
- ▭ East Excavation to 1' bgs (~1,269 sq.ft. | 146 ft.)
- ▭ East Excavation to 2' bgs (~1,633 sq.ft. | 274 ft.)
- ▭ Excavation to 5' bgs (~87 sq.ft. | 38 ft.)
- ▭ Excavation to 6' bgs (~2,065 sq.ft. | 199 ft.)
- ▭ North Excavation to 3' bgs (~1,048 sq.ft. | 164 ft.)
- ▭ North Excavation to 4' bgs (~199 sq.ft. | 66 ft.)
- ▭ Pasture Excavation to 1.5' bgs (~794 sq.ft. | 128 ft.)
- ▭ South Excavation to 3' bgs (~338 sq.ft. | 108 ft.)
- ▭ South Excavation to 4' bgs (~1,681 sq.ft. | 293 ft.)
- ▭ West Excavation to 1.5' bgs (~1,521 sq.ft. | 260 ft.)
- ▭ West Excavation to 1' bgs (~1,102 sq.ft. | 179 ft.)
- ▭ West Excavation to 2' bgs (~1,839 sq.ft. | 339 ft.)



0 15 30 ft  
 Map Center:  
 Lat: 32.092096°N  
 Long: 103.918814°W  
 NAD 1983 UTM Zone 13N  
 Date: Feb 27/25

**Confirmatory Sampling Site Schematic**  
**Brushy Draw 30-31 Fed Battery**

FIGURE:  
**2**



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, 2024. Approximate lease boundary from imagery by Vertex Professional Services Ltd. (VPS), 2024. Site features from GPS by VPS, 2025.

Document Path: C:\Users\cserrano\Documents\VERTX\USXTO Energy\inc\24E-04918 - Brushy Draw 30-31 Fed Battery\Project\24E-04918.aprx

## **TABLES**

Client Name: ExxonMobil Upstream Company  
 Site Name: Brushy Draw 30-31 Federal Battery  
 NMOCD Tracking #:nAPP2431846528  
 Project #: 24E-04918  
 Lab Report #: H247231

Table 3. Initial Characterization Sample Laboratory Results										
Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					Chloride Concentration
			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)	(mg/kg)
Depth to Groundwater <50										
BH24-01	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	96
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
BH24-02	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	192
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
BH24-03	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16
BH24-04	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	144
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	64
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	112
BH24-05	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	4640
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	304
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	128
BH24-06	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	112
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	80
	4R	November 22, 2024	ND	ND	ND	140	36.8	140	176.8	64
BH24-07	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	80
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16
BH24-08	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
BH24-09	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	192
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16
BH24-10	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	48
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	48
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
BH24-11	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	96
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
BH24-12	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	80
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16



Client Name: ExxonMobil Upstream Company  
 Site Name: Brushy Draw 30-31 Federal Battery  
 NMOCD Tracking #:nAPP2431846528  
 Project #: 24E-04918  
 Lab Report #: H247231

Table 3. Initial Characterization Sample Laboratory Results										
Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					Chloride Concentration
			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)	(mg/kg)
Depth to Groundwater <50										
BH24-13	0	November 22, 2024	ND	ND	ND	1670	411	<b>1670</b>	<b>2081</b>	<b>1230</b>
	2	November 22, 2024	ND	ND	12.6	784	140	<b>796.6</b>	<b>936.6</b>	<b>2280</b>
	4R	November 22, 2024	ND	ND	26.6	500	73.8	<b>526.6</b>	<b>600.4</b>	<b>1920</b>
BH24-14	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	208
	2	November 22, 2024	ND	ND	ND	17.5	ND	17.5	17.5	144
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16
BH24-15	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	80
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	48
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16
BH24-16	0	November 22, 2024	ND	ND	221	3880	497	<b>4101</b>	<b>4598</b>	<b>2520</b>
	2	November 22, 2024	ND	ND	ND	123	11.1	<b>123</b>	<b>134.1</b>	<b>6800</b>
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
BH24-17	0	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	96
	2	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	32
	4	November 22, 2024	ND	ND	ND	ND	ND	ND	ND	16

"ND" Not Detected at the Reporting Limit

R indicates Refusal

"-" indicates not analyzed/assessed

**Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria**



Client Name: ExxonMobil Upstream Company  
 Site Name: Brushy Draw 30-31 Federal Battery  
 NMOCD Tracking #: nAPP2431846528  
 Project #: 24E-04918  
 Lab Reports: H250926, H250956, H251073, H251074, and H251075

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 < 50 Feet bgs
BS25-01	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	48
BS25-02	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-03	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-04	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-05	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-06	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	48
BS25-07	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	48
BS25-08	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-09	4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-10	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	176
BS25-11	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-12	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-13	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-14	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-15	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-16	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-17	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-18	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-19	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	48
BS25-20	6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	64
BS25-21	3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-22	3	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	96
BS25-23	3	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	64
BS25-24	2	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	64
BS25-25	2	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-26	2	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	64
BS25-27	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	64
BS25-28	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	48
BS25-29	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	64
BS25-30	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-31	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	48
BS25-32	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	16
BS25-33	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	112
BS25-34	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	80
BS25-35	1	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-36	1	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-37	1	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32
BS25-38	1	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND	32



Client Name: ExxonMobil Upstream Company  
 Site Name: Brushy Draw 30-31 Federal Battery  
 NMOCD Tracking #: nAPP2431846528  
 Project #: 24E-04918  
 Lab Reports: H250926, H250956, H251073, H251074, and H251075

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 <50 Geet bgs										
BS25-39	1	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-40	1	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-41	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-42	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-43	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-44	1.5	February 17, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-45	2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-46	2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-47	2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-48	2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-49	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-50	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-51	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-52	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-53	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-54	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-55	1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-56	5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-57	4	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-58	1.5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-59	3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-60	3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-61	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-62	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-63	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-64	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-65	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-66	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-67	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-68	3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-69	3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-70	3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-71	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-72	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-73	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-74	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-75	2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	64
WS25-01	0-4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	16



Client Name: ExxonMobil Upstream Company  
 Site Name: Brushy Draw 30-31 Federal Battery  
 NMOCD Tracking #: nAPP2431846528  
 Project #: 24E-04918  
 Lab Reports: H250926, H250956, H251073, H251074, and H251075

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 <50 feet bgs										
WS25-02	0-4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-03	0-4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-04	0-4	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	ND
WS25-05	3-6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	192
WS25-06	2-6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-07	3-6	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-08	1.5-3	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
WS25-09	1.5-2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
WS25-10	0-1.5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	112
WS25-11	0-1.5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	48
WS25-12	0-1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-13	0-1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	80
WS25-14	0-1.5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-15	0-2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	48
WS25-16	1-2	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-17	0-1	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	224
WS25-18	1-4	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	112
WS25-19	4-5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	64
WS25-20	0-1.5	February 16, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-21	0-3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-22	0-3	February 20, 2025	ND	ND	ND	ND	ND	ND	ND	48
WS25-23	0-2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-24	0-2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-25	2-3	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-26	2-3	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16
WS25-27	0-2	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	208
BackFill	-	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	240
TopSoil	-	February 21, 2025	ND	ND	ND	ND	ND	ND	ND	16

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

**Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria**

**Bold and green shaded indicates exceedance outside of NMOCD Reclamation Closure Criteria**



## **APPENDIX A - Closure Criteria Research Documentation**

## APPENDIX B – Daily Field and Sampling Report(s)

## **APPENDIX C – Laboratory Data Report(s) and Chain of Custody Form(s)**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

December 03, 2024

CHAD HENSLEY  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31

Enclosed are the results of analyses for samples received by the laboratory on 11/25/24 16:22.

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](http://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". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -01 @ 0' (H247231-01)**

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	11/28/2024	ND	2.27	113	2.00	6.17	
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/27/2024	ND	416	104	400	3.92	

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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -01 @ 2' (H247231-02)**

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	11/28/2024	ND	2.27	113	2.00	6.17	
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/27/2024	ND	416	104	400	3.92	

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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -01 @ 4' (H247231-03)**

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	11/28/2024	ND	2.27	113	2.00	6.17		
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55		
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8		
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4		
Total BTEX	<0.300	0.300	11/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/27/2024	ND	416	104	400	3.92		

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	11/27/2024	ND	206	103	200	1.25		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -02 @ 0' (H247231-04)**

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	11/28/2024	ND	2.27	113	2.00	6.17	
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	11/27/2024	ND	416	104	400	3.92	

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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -02 @ 2' (H247231-05)**

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	11/28/2024	ND	2.27	113	2.00	6.17	
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/27/2024	ND	416	104	400	3.92	

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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -02 @ 4' (H247231-06)**

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	11/28/2024	ND	2.27	113	2.00	6.17	
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/27/2024	ND	416	104	400	3.92	

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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -03 @ 0' (H247231-07)**

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	11/28/2024	ND	2.27	113	2.00	6.17	
Toluene*	<0.050	0.050	11/28/2024	ND	2.18	109	2.00	9.55	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.29	114	2.00	12.8	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.80	113	6.00	13.4	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/27/2024	ND	416	104	400	3.92	

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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -03 @ 2' (H247231-08)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -03 @ 4' (H247231-09)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12		
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20		
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72		
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40		
Total BTEX	<0.300	0.300	11/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -04 @ 0' (H247231-10)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -04 @ 2' (H247231-11)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-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	12/02/2024	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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 98.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -04 @ 4' (H247231-12)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -05 @ 0' (H247231-13)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12		
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20		
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72		
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40		
Total BTEX	<0.300	0.300	11/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4640	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -05 @ 2' (H247231-14)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -05 @ 4' (H247231-15)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/02/2024	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	11/27/2024	ND	206	103	200	1.25	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	217	108	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -06 @ 0' (H247231-16)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 98.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -06 @ 2' (H247231-17)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 99.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -06 @ 4' (H247231-18)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
<b>DRO &gt;C10-C28*</b>	<b>140</b>	10.0	11/27/2024	ND	202	101	200	6.18	
<b>EXT DRO &gt;C28-C36</b>	<b>36.8</b>	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -07 @ 0' (H247231-19)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 89.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -07 @ 2' (H247231-20)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 98.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -07 @ 4' (H247231-21)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 99.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -08 @ 0' (H247231-22)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12		
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20		
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72		
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40		
Total BTEX	<0.300	0.300	11/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 74.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -08 @ 2' (H247231-23)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -08 @ 4' (H247231-24)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 76.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -09 @ 0' (H247231-25)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>192</b>	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 75.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -09 @ 2' (H247231-26)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 80.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -09 @ 4' (H247231-27)**

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	11/28/2024	ND	1.98	99.1	2.00	5.12	
Toluene*	<0.050	0.050	11/28/2024	ND	1.94	96.8	2.00	8.20	
Ethylbenzene*	<0.050	0.050	11/28/2024	ND	2.09	104	2.00	8.72	
Total Xylenes*	<0.150	0.150	11/28/2024	ND	6.41	107	6.00	9.40	
Total BTEX	<0.300	0.300	11/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/02/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 78.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -10 @ 0' (H247231-28)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 62.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 62.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -10 @ 2' (H247231-29)**

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	11/29/2024	ND	2.09	105	2.00	5.49		
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24		
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34		
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12		
Total BTEX	<0.300	0.300	11/29/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 78.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -10 @ 4' (H247231-30)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 78.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -11 @ 0' (H247231-31)**

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	11/29/2024	ND	2.09	105	2.00	5.49		
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24		
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34		
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12		
Total BTEX	<0.300	0.300	11/29/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 73.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -11 @ 2' (H247231-32)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 76.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -11 @ 4' (H247231-33)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 75.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -12 @ 0' (H247231-34)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 72.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -12 @ 2' (H247231-35)**

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	11/29/2024	ND	2.09	105	2.00	5.49		
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24		
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34		
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12		
Total BTEX	<0.300	0.300	11/29/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/03/2024	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	11/27/2024	ND	223	112	200	4.21		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	202	101	200	6.18		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 75.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -12 @ 4' (H247231-36)**

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	11/29/2024	ND	2.09	105	2.00	5.49		
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24		
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34		
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12		
Total BTEX	<0.300	0.300	11/29/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -13 @ 0' (H247231-37)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1230</b>	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
<b>DRO &gt;C10-C28*</b>	<b>1670</b>	10.0	11/27/2024	ND	214	107	200	6.15	
<b>EXT DRO &gt;C28-C36</b>	<b>411</b>	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 66.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -13 @ 2' (H247231-38)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2280</b>	16.0	12/03/2024	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
<b>GRO C6-C10*</b>	<b>12.6</b>	10.0	11/27/2024	ND	209	104	200	5.52	
<b>DRO &gt;C10-C28*</b>	<b>784</b>	10.0	11/27/2024	ND	214	107	200	6.15	
<b>EXT DRO &gt;C28-C36</b>	<b>140</b>	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -13 @ 4' (H247231-39)**

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	12/03/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	12/03/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.00	99.8	2.00	4.34	GC-NC
Total Xylenes*	<0.150	0.150	12/03/2024	ND	5.96	99.3	6.00	4.12	GC-NC
Total BTEX	<0.300	0.300	12/03/2024	ND					GC-NC

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1920</b>	16.0	12/03/2024	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
<b>GRO C6-C10*</b>	<b>26.6</b>	10.0	11/27/2024	ND	209	104	200	5.52	
<b>DRO &gt;C10-C28*</b>	<b>500</b>	10.0	11/27/2024	ND	214	107	200	6.15	
<b>EXT DRO &gt;C28-C36</b>	<b>73.8</b>	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 92.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -14 @ 0' (H247231-40)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>208</b>	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 76.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -14 @ 2' (H247231-41)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>144</b>	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
<b>DRO &gt;C10-C28*</b>	<b>17.5</b>	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 75.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -14 @ 4' (H247231-42)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 78.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -15 @ 0' (H247231-43)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 71.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -15 @ 2' (H247231-44)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -15 @ 4' (H247231-45)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 75.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -16 @ 0' (H247231-46)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/29/2024	ND	2.09	105	2.00	5.49		
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24		
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	GC-NC	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	GC-NC	
Total BTEX	<0.300	0.300	11/29/2024	ND					GC-NC	

Surrogate: 4-Bromofluorobenzene (PID) 144 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2520	16.0	12/03/2024	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*	221	10.0	11/27/2024	ND	209	104	200	5.52		
DRO >C10-C28*	3880	10.0	11/27/2024	ND	214	107	200	6.15		
EXT DRO >C28-C36	497	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -16 @ 2' (H247231-47)**

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	11/29/2024	ND	2.09	105	2.00	5.49	
Toluene*	<0.050	0.050	11/29/2024	ND	1.99	99.3	2.00	5.24	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.00	99.8	2.00	4.34	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	5.96	99.3	6.00	4.12	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>6800</b>	16.0	12/03/2024	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	11/27/2024	ND	209	104	200	5.52	
<b>DRO &gt;C10-C28*</b>	<b>123</b>	10.0	11/27/2024	ND	214	107	200	6.15	
<b>EXT DRO &gt;C28-C36</b>	<b>11.1</b>	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 77.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -16 @ 4' (H247231-48)**

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	11/29/2024	ND	2.11	105	2.00	5.57	
Toluene*	<0.050	0.050	11/29/2024	ND	2.15	108	2.00	6.58	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.08	104	2.00	7.07	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	6.53	109	6.00	6.96	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	12/02/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 85.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -17 @ 0' (H247231-49)**

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	11/29/2024	ND	2.11	105	2.00	5.57		
Toluene*	<0.050	0.050	11/29/2024	ND	2.15	108	2.00	6.58		
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.08	104	2.00	7.07		
Total Xylenes*	<0.150	0.150	11/29/2024	ND	6.53	109	6.00	6.96		
Total BTEX	<0.300	0.300	11/29/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/02/2024	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	11/27/2024	ND	209	104	200	5.52		
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15		
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND						

Surrogate: 1-Chlorooctane 81.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -17 @ 2' (H247231-50)**

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	11/29/2024	ND	2.11	105	2.00	5.57	
Toluene*	<0.050	0.050	11/29/2024	ND	2.15	108	2.00	6.58	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.08	104	2.00	7.07	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	6.53	109	6.00	6.96	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/02/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	11/25/2024	Sampling Date:	11/22/2024
Reported:	12/03/2024	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31	Sampling Condition:	Cool & Intact
Project Number:	24E-04918	Sample Received By:	Alyssa Parras
Project Location:	XTO		

**Sample ID: BH24 -17 @ 4' (H247231-51)**

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	11/29/2024	ND	2.11	105	2.00	5.57	
Toluene*	<0.050	0.050	11/29/2024	ND	2.15	108	2.00	6.58	
Ethylbenzene*	<0.050	0.050	11/29/2024	ND	2.08	104	2.00	7.07	
Total Xylenes*	<0.150	0.150	11/29/2024	ND	6.53	109	6.00	6.96	
Total BTEX	<0.300	0.300	11/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/02/2024	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	11/27/2024	ND	209	104	200	5.52	
DRO >C10-C28*	<10.0	10.0	11/27/2024	ND	214	107	200	6.15	
EXT DRO >C28-C36	<10.0	10.0	11/27/2024	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-05 The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Mariand Hobbs, NW 88240  
 (775) 393-2026 FAX (775) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1086

BILL TO

ANALYSIS REQUEST

Company Name: <b>Vertex Resource</b>	P.O. #:
Project Manager: <b>Chad Hensley</b>	Company: <b>XTO</b>
Address: <b>3101 Boyd Dr</b>	Address: <b>3104 E Greene St</b>
City: <b>Carlsbad</b>	City: <b>Carlsbad</b>
State: <b>NM</b> Zip: <b>88720</b>	State: <b>NM</b> Zip: <b>88720</b>
Phone #: _____	Phone #: <b>575-887-7324</b>
Project #: <b>24E-04418</b>	Project Owner: <b>Amy Ruth</b>
Project Name: <b>Brasny draw 30-31</b>	Project Location: <b>Brasny draw 30-31</b>
Sampler Name: <b>Riley Ploger</b>	Sampler Name: _____

Lab I.D.	Sample I.D.	DATE	TIME	ANALYSIS REQUEST
BH24-01	01	11:23:24	10:35	Chloride
BH24-01	02	11:23:24	10:40	TPH (Gro, Dro, MRU)
BH24-01	03	11:23:24	10:45	BTEX
BH24-01	04	11:23:24	10:47	
BH24-01	05	11:23:24	10:52	
BH24-01	06	11:23:24	10:56	
BH24-01	07	11:23:24	11:03	
BH24-01	08	11:23:24	11:07	
BH24-01	09	11:23:24	11:11	
BH24-01	10	11:23:24	11:16	

2. BASE NOTE: Sample and container must be clearly labeled with date, time, location, and sampler name. All containers must be clearly labeled with the name of the sampler. All containers must be clearly labeled with the name of the sampler. All containers must be clearly labeled with the name of the sampler.

Relinquished By: **R. Keene** Date: **11.23.24** Received By: **APAVAS**

Time: **4:22** Date: \_\_\_\_\_

Delivered By: **Circle One**  Driver  Other  Other

Sample: **JPGS**  **Bus**  **Other**  **Other**

Checked By: **AP**

Remarks: **Chensley Vertex resource.com**  
**CSST code # 2027691371**  
**Incident # 11172431846528**



101 East Marano Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2478

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 OF 6

Company Name: **Vertex** BILL TO ANALYSIS REQUEST

Project Manager: **c. Hensley** P.O. #:

Address: **3101 Boyd dr** Company: **XTO**

City: **Carlsbad** State: ZIP: Address: **3104 E Greene**

Phone #: Fax #: City: **Carlsbad**

Project #: **24E-04918** Project Owner: **Amy Ruth** State: NM ZIP: **88706**

Project Name: **Brushy draw 30-31** Phone #:

Project Location: Phone #:

Sampler Name: **R. Plogger** Fax #:

Lab I.D.	Sample I.D.	MATRIX				PRESERV	SAMPLING
		GRAV (COM)	SEMI COND	RELIAM COND	RELIAM COND		

Lab I.D.	Sample I.D.	GRAV (COM)	SEMI COND	RELIAM COND	RELIAM COND	PRESERV	SAMPLING
Hay 1231	BH24-04 07						
11	04						
12	05						
13	05						
14	05						
15	05						
16	06						
17	06						
18	06						
19	07						
20	07						

Chloride  
TPH (Gro, Dro, mro)  
BTEX

2-BASE NOTE: JARVIS and CHEMICAL ANALYSIS...  
REMARKS: (05) code # 2027691371  
Incident # NH772431846528

Relinquished By: **RK** Date: **11.25.24** Received By: **ADAWES**

Time: **4:24** Time: **10:22**

Delivered By: **Circle One** Checked By: **AD**  
Sampler: **UPS** **Bus** **Other** Sample Condition: **15i**  
Corrected Temp: **0.9i** Corrected Temp: **0.9i**



101 East Marland, Hobbs, NM 88240  
1575 393-2326 FAX 1575 393-2478

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3 OF 6

BILL TO

ANALYSIS REQUEST

Company Name: **Vertex** P.O. #:

Project Manager: **C. Hensley** Company: **X10**

Address:

City: State: Zip: Attn:

Phone #: Fax #: Address: **3104 Greenest**

Project #: **24E-04918** Project Owner: **Amy Ruth** City: **Carlsbad**

Project Name: **Brushy draw 30-31** State: **NM** Zip: **88220**

Project Location: Phone #: Fax #:

Sampler Name: **R. Toyler**

Lab I.D.	Sample I.D.	MATRIX				DATE	TIME	ANALYSIS
		GLASS OR (COMP)	# CONTAINERS	GROUNDING	REWORK			
<b>H247531</b>	<b>BH24-07</b>	<b>Q</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>11-22-24</b>	<b>12:16</b>	<b>Chloride TPH (Gro, Dro, MRO) BTEX</b>
<b>02</b>	<b>08</b>	<b>0'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>12:22</b>	
<b>03</b>	<b>08</b>	<b>2'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>12:32</b>	
<b>04</b>	<b>08</b>	<b>4'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>12:36</b>	
<b>05</b>	<b>09</b>	<b>0'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>12:54</b>	
<b>06</b>	<b>09</b>	<b>2'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>12:59</b>	
<b>07</b>	<b>09</b>	<b>4'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>1:06</b>	
<b>08</b>	<b>10</b>	<b>0'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>1:13</b>	
<b>09</b>	<b>10</b>	<b>2'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>1:17</b>	
<b>10</b>	<b>10</b>	<b>4'</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>1:21</b>	

PLEASE NOTE: Labels and Dates are required. Containers should be kept sealed and stored in the cooler to the extent possible. At no time should they be opened and exposed to the atmosphere. All samples should be kept in the cooler until they are analyzed. Do not use the cooler for any other purpose. Do not use the cooler for any other purpose. Do not use the cooler for any other purpose. Do not use the cooler for any other purpose.

Relinquished By: **R. Toyler** Date: **11-25-24** Received By: **APR**

Time: **4:23**

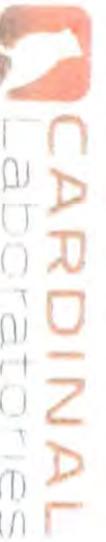
Delivered By: **Circle One** Checked **Time** **15c** Sample Condition: **Intact** CHECKER BY: **AP**

Relinquished By: **APR** Date: **11-25-24** Received By: **APR**

Time: **1:23**

Remarks: **COST code # 202 7691371**  
**Incident # N1772431846528**





101 East Marland, Hobbs, NM 88240  
PTE 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

5 OF 6

Company Name: **Vertex** P.O. #: **X70** ANALYSIS REQUEST

Project Manager: **C. Hensley** Company: **X70**

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Project #: **ZYF-04918** Project Owner: **Carlsbad**

Project Name: **Brusny Draw 30-31** State: **NM** Zip: **88220**

Project Location: \_\_\_\_\_ Phone #: \_\_\_\_\_

Sampler Name: **R. Proyer** Fax #: \_\_\_\_\_

Lab ID	Sample ID	DATE	TIME	MATRIX		PRESERV.		SAMPLING	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	ACIDIC	OTHER		
<b>Haltaz</b>	<b>BH24-14</b>	<b>21</b>	<b>2:35</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<b>Chloride</b>
<b>U1</b>	<b>14</b>	<b>14</b>	<b>4'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<b>TPH (Gro, Dro, MRO)</b>
<b>U2</b>	<b>15</b>	<b>15</b>	<b>0'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<b>BTEX</b>
<b>U3</b>	<b>15</b>	<b>15</b>	<b>2'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U4</b>	<b>15</b>	<b>15</b>	<b>4'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U5</b>	<b>16</b>	<b>16</b>	<b>0'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U6</b>	<b>16</b>	<b>16</b>	<b>2'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U7</b>	<b>16</b>	<b>16</b>	<b>4'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U8</b>	<b>17</b>	<b>17</b>	<b>0'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U9</b>	<b>17</b>	<b>17</b>	<b>4'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	
<b>U0</b>	<b>17</b>	<b>17</b>	<b>8'</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	

REMARKS: **Cost code # 2027691371**

Relinquished By: \_\_\_\_\_ Date: **4.23** Received By: **APAWA**

Time: **11:25:24**

Delivered By: (Circle One) \_\_\_\_\_

Sample: UPS • Bus • Other \_\_\_\_\_

Conserved Temp: **15.2** Sample Condition: **Intact**

Checked By: **AD**

Time: **11:25**

Remarks: **Incident # NAPP2431846528**



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

6 OF 6

BILL TO

ANALYSIS REQUEST

Company Name: \_\_\_\_\_ P.O. #: \_\_\_\_\_  
 Project Manager: \_\_\_\_\_ Company: **XTO**  
 Address: \_\_\_\_\_ Attn: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 Project #: **24E-04918** Project Owner: \_\_\_\_\_  
 City: **CARLSBAD**  
 Project Name: **BRUSHY DAV** State: **NM** Zip: **88220**  
 Project Location: \_\_\_\_\_ Phone #: \_\_\_\_\_  
 Sampler Name: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	FOR LAB USE ONLY	GRAB OR (C)OMP	# CONTAINERS	MATRIX					DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE			
<b>1847231</b>	<b>BH24-17 84'</b>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<b>11-22-24</b>	<b>4:02</b>	<b>Chloride</b>
												<b>TPH (Gro, Dro, MPO)</b>
												<b>BTEX</b>

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including without limitation business interruptions, loss of use, or loss of profits incurred by client, its subcontractors, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: \_\_\_\_\_ Date: **11.25.24** Received By: \_\_\_\_\_  
 Time: **4:23**  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Time: \_\_\_\_\_  
 Delivered By: (Circle One) Observed Temp. °C: **15.0** Sample Condition:  Cool  Intact  
 Corrected Temp. °C: **0.9**  Yes  No  
 Checked By: **AD**  
 Turnaround Time: **Standard** Bacteria (only)  Cool  Intact  
 Thermometer ID: **4438**  Yes  No  
 Correction Factor: **+5.0 C-D**  Yes  No  
 Corrected Temp. °C: \_\_\_\_\_  
 Verbal Results:  Yes  No Add'l Phone #: \_\_\_\_\_  
 All Results are emailed. Please provide Email address: \_\_\_\_\_  
 REMARKS: **LOST CODE # 2027691371**  
**Incident # NA772431846528**

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

February 19, 2025

CHAD HENSLEY  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/17/25 12:30.

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](http://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  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 45 2' (H250926-01)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/17/2025	ND	416	104	400	3.77		

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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 94.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 46 2' (H250926-02)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/17/2025	ND	416	104	400	3.77		

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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 96.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 47 2' (H250926-03)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/17/2025	ND	416	104	400	3.77		

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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 98.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 48 2' (H250926-04)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/17/2025	ND	416	104	400	3.77		

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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 49 1' (H250926-05)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 97.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 50 1' (H250926-06)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/18/2025	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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 51 1' (H250926-07)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 96.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 52 1' (H250926-08)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/18/2025	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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 95.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 53 1' (H250926-09)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/18/2025	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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 99.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 54 1' (H250926-10)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/18/2025	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	02/17/2025	ND	202	101	200	2.93		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	188	93.8	200	3.99		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 92.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 55 1' (H250926-11)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 56 5' (H250926-12)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 92.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 57 4' (H250926-13)**

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	02/17/2025	ND	2.09	105	2.00	2.93		
Toluene*	<0.050	0.050	02/17/2025	ND	2.14	107	2.00	0.346		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.16	108	2.00	0.00998		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	0.338		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 85.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 58 1.5' (H250926-14)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 99.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 08 1.5-3' (H250926-15)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 09 1.5-2' (H250926-16)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 90.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 10 0-1.5' (H250926-17)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 84.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 11 0-1.5' (H250926-18)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 93.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 12 0-1' (H250926-19)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL	Sampling Condition:	Cool & Intact
Project Number:	BATTERY 24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 13 0-1' (H250926-20)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 14 0-1.5' (H250926-21)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 86.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 15 0-2' (H250926-22)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>48.0</b>	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 79.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 16 1-2' (H250926-23)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>96.0</b>	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 17 0-1' (H250926-24)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	02/18/2025	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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 85.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 18 1-4' (H250926-25)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	02/18/2025	ND	432	108	400	3.77		

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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 19 4-5' (H250926-26)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>64.0</b>	16.0	02/18/2025	ND	432	108	400	3.77		

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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/17/2025	Sampling Date:	02/16/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: WS 25 - 20 0-1.5' (H250926-27)**

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	02/17/2025	ND	2.20	110	2.00	1.89		
Toluene*	<0.050	0.050	02/17/2025	ND	2.28	114	2.00	2.30		
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.24	112	2.00	2.79		
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.61	110	6.00	2.84		
Total BTEX	<0.300	0.300	02/17/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/18/2025	ND	432	108	400	3.77		

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	02/17/2025	ND	190	94.8	200	8.81		
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	171	85.4	200	14.8		
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND						

Surrogate: 1-Chlorooctane 88.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Notes and Definitions**

- 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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

48-hour Rush

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

BILL TO

ANALYSIS REQUEST

Project Manager: Chad Hensley  
 Address: 3101 Boyd Drive  
 City: Carlsbad State: NM Zip: 88220  
 P.O. #: Company: XTO Energy, Inc.  
 Attn: Colton Brown  
 Project #: 25E-00017 Fax #: 575.725.5001 Address: 3104 E. Greene St  
 Project Owner: Colton Brown  
 Project Name: Brushy Draw 30-31 Federal Battery - North City: Carlsbad  
 State: NM Zip: 88220  
 Project Location: Phone #: 575-988-2390  
 Sampler Name: L. Pullman Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	PRESERV.			SAMPLING
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			ICE / COOL	OTHER :		
1	BS25-45 2'	C 1	X						02.16.25	10:50	X	X	X		
2	BS25-46 2'	C 1	X						02.16.25	10:45	X	X	X		
3	BS25-47 2'	C 1	X						02.16.25	10:40	X	X	X		
4	BS25-48 2'	C 1	X						02.16.25	10:35	X	X	X		
5	BS25-49 1'	C 1	X						02.16.25	10:30	X	X	X		
6	BS25-50 1'	C 1	X						02.16.25	10:20	X	X	X		
7	BS25-51 1'	C 1	X						02.16.25	10:15	X	X	X		
8	BS25-52 1'	C 1	X						02.16.25	10:05	X	X	X		
9	BS25-53 1'	C 1	X						02.16.25	10:00	X	X	X		
10	BS25-54 1'	C 1	X						02.16.25	10:10	X	X	X		

PLEASE NOTE: Liability and Damages: Customer liability and client's responsibility for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other claims whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client. In substitution, estimates or instructions arising out of or related to the performance of services furnished by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]* Date: 2-17-25 Received By: *[Signature]* Date: 02-30  
 Receiving Date: 03-30  
 Observed Temp. °C: 3.7 Corrected Temp. °C: 4.0  
 Sample Condition: Cool  / Intact   
 CHECKED BY: *[Signature]*  
 Verbal Result:  Yes  No  
 Please Email Results: Chad Hensley (Chensley@vertexresource.com), Lakin Pullman (lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)  
 REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: nAPP2431846528  
 Thermometer ID: 488 Correction Factor: +0.35°C  
 Standard  Observed Temp. °C:  Backtitrated  Sample Condition:  Yes  No  
 Corrected Temp. °C:  Yes  No

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

1/3



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

48-hour Rush

BILL TO

ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)  
 Project Manager: Chad Hensley  
 Address: 3101 Boyd Drive  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: 575.725.5001 Fax #: 575.725.5001  
 Project #: 25E-00017 Project Owner: Colton Brown  
 Project Name: Brushy Draw 30-31 Federal Battery - North  
 Project Location: State: NM Zip: 88220  
 Sampler Name: L. Pullman  
 P.O. #: Company: XTO Energy, Inc.  
 Attn: Colton Brown  
 Address: 3104 E. Greene St  
 City: Carlsbad  
 State: NM Zip: 88220  
 Phone #: 575-988-2390  
 Fax #:

Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	BTEX (8021)			TPH:8015D(GRO / DRO / MRO)			Chloride		
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			ACID/BASE:	ICE / COOL	OTHER :						
11 BS25-55 1'	C 1	X							02.16.25	10:25	X	X	X						
12 BS25-56 5'	C 1	X							02.16.25	9:50	X	X	X						
13 BS25-57 4'	C 1	X							02.16.25	9:45	X	X	X						
14 BS25-58 1.5'	C 1	X							02.16.25	9:40	X	X	X						
15 WS25-08 1.5-3'	C 1	X							02.16.25	9:00	X	X	X						
16 WS25-09 1.5-2'	C 1	X							02.16.25	8:55	X	X	X						
17 WS25-10 0-1.5'	C 1	X							02.16.25	8:50	X	X	X						
18 WS25-11 0-1.5'	C 1	X							02.16.25	8:45	X	X	X						
19 WS25-12 0-1'	C 1	X							02.16.25	8:40	X	X	X						
20 WS25-13 0-1'	C 1	X							02.16.25	8:35	X	X	X						

PLEASE NOTE: Lending and client's equipment remain the property of the client. The client is responsible for any damage to the equipment or for any loss of data. The client is also responsible for any damage to the equipment or for any loss of data. The client is also responsible for any damage to the equipment or for any loss of data. The client is also responsible for any damage to the equipment or for any loss of data.

Relinquished By: *Robert Pullman*  
 Date: 2-17-25  
 Time: 09:30  
 Received By: *[Signature]*  
 Date: 1-30  
 Time: 1:30

Delivered By: (Circle One)  
 Sampler - UPS - Bus - Other:  UPS

Observed Temp. °C: 3.7  
 Corrected Temp. °C: 4.0

Sample Condition:  
 Cool  Intact  
 No  No

CHECKED BY: *[Signature]*  
 (Initials)

Thermometer ID: *W087*  
 Correction Factor: *0.3°C*

Remarks: Direct Bill to XTO Energy, Inc., Cost Center #: 2027691371, Incident #: NAPP2431846528

2/3



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

48-hour Rush

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

BILL TO

ANALYSIS REQUEST

Project Manager: Chad Hensley  
 Address: 3101 Boyd Drive  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: 575.725.5001 Fax #:   
 Project #: 25E-00017 Project Owner: Colton Brown  
 Project Name: Brushy Draw 30-31 Federal Battery - North  
 Project Location: State: NM Zip: 88220  
 Phone #: 575-988-2390  
 Sampler Name: L. Pullman Fax #:   
 FOR LAB USE ONLY

Sample I.D.	Date	Time	Matrix	Date	Time	BTEX (8021)			TPH:8015D(GRO / DRO / MRO)			Chloride		
						GROUNDWATER	WASTEWATER	SOIL	GROUNDWATER	WASTEWATER	SOIL	GROUNDWATER	WASTEWATER	SOIL
HS00936	2/17/25	13:30	(G)RAB OR (C)OMP.	02.16.25	8:30	X	X	X	X	X	X	X	X	X
WS25-14 0-1.5'			C 1	02.16.25	9:05	X	X	X	X	X	X	X	X	X
WS25-15 0-2'			C 1	02.16.25	9:10	X	X	X	X	X	X	X	X	X
WS25-16 1-2'			C 1	02.16.25	9:15	X	X	X	X	X	X	X	X	X
WS25-17 0-1'			C 1	02.16.25	9:25	X	X	X	X	X	X	X	X	X
WS25-18 1-4'			C 1	02.16.25	9:30	X	X	X	X	X	X	X	X	X
WS25-19 4-5'			C 1	02.16.25	9:35	X	X	X	X	X	X	X	X	X
WS25-20 0-1.5'			C 1											

PLEASE NOTE: Labels and samples. Containers clearly and clearly indicate volume for any claim arising under these terms or for any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]*  
 Date: 2-17-25  
 Time: 13:30  
 Received By: *[Signature]*  
 Date: 1/30  
 Time:   
 Observed Temp. °C: 3.7  
 Corrected Temp. °C: 4.0  
 Sample Condition: Cool Intact  Yes  No  
 Checked By: *[Signature]*  
 Turnaround Time:  Rush  Standard  
 Thermometer ID: #140  
 Correction Factor: -0.3°C  
 Verbal Result:  Yes  No  
 Add'l Phone #:   
 Please Email Results: Chad Hensley (Chensley@vertextresource.com), Lakin Pullman (lpullman@vertextresource.com), Andrew Ludvik (ALudvik@vertextresource.com)  
 REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 202789137, Incident #: nAPP243146528

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

3/13



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

February 20, 2025

CHAD HENSLEY  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/18/25 13:50.

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](http://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  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 22 3' (H250956-01)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 23 3' (H250956-02)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>64.0</b>	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 24 2' (H250956-03)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 25 2' (H250956-04)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 26 2' (H250956-05)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 27 1.5' (H250956-06)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 28 1.5' (H250956-07)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 29 1.5' (H250956-08)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 30 1.5' (H250956-09)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 94.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 31 1.5' (H250956-10)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 32 1.5' (H250956-11)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>16.0</b>	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 98.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 33 1.5' (H250956-12)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3	
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5	
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5	
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0	
Total BTEX	<0.300	0.300	02/19/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/19/2025	ND	448	112	400	3.64	

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	02/19/2025	ND	191	95.4	200	2.18	
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39	
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 34 1.5' (H250956-13)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 35 1' (H250956-14)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 94.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 36 1' (H250956-15)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 37 1' (H250956-16)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/19/2025	ND	448	112	400	3.64		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 98.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 38 1' (H250956-17)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3	
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5	
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5	
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0	
Total BTEX	<0.300	0.300	02/19/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/19/2025	ND	416	104	400	3.77	

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	02/19/2025	ND	191	95.4	200	2.18	
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39	
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND					

Surrogate: 1-Chlorooctane 97.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 39 1' (H250956-18)**

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	02/19/2025	ND	2.00	99.8	2.00	13.3		
Toluene*	<0.050	0.050	02/19/2025	ND	2.27	113	2.00	14.5		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.52	126	2.00	16.5		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.72	129	6.00	18.0		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/19/2025	ND	416	104	400	3.77		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 40 1' (H250956-19)**

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	02/19/2025	ND	2.06	103	2.00	8.87		
Toluene*	<0.050	0.050	02/19/2025	ND	2.32	116	2.00	8.54		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.42	121	2.00	8.60		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.45	124	6.00	9.59		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/19/2025	ND	416	104	400	3.77		

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	02/19/2025	ND	191	95.4	200	2.18		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	179	89.5	200	4.39		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 41 1.5' (H250956-20)**

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	02/19/2025	ND	2.06	103	2.00	8.87		
Toluene*	<0.050	0.050	02/19/2025	ND	2.32	116	2.00	8.54		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.42	121	2.00	8.60		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.45	124	6.00	9.59		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/19/2025	ND	416	104	400	3.77		

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	02/19/2025	ND	183	91.7	200	0.260		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	183	91.7	200	1.50		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.1 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 42 1.5' (H250956-21)**

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	02/19/2025	ND	2.06	103	2.00	8.87		
Toluene*	<0.050	0.050	02/19/2025	ND	2.32	116	2.00	8.54		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.42	121	2.00	8.60		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.45	124	6.00	9.59		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/19/2025	ND	416	104	400	3.77		

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	02/19/2025	ND	183	91.7	200	0.260		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	183	91.7	200	1.50		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 43 1.5' (H250956-22)**

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	02/19/2025	ND	2.06	103	2.00	8.87		
Toluene*	<0.050	0.050	02/19/2025	ND	2.32	116	2.00	8.54		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.42	121	2.00	8.60		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.45	124	6.00	9.59		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/19/2025	ND	416	104	400	3.77		

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	02/19/2025	ND	183	91.7	200	0.260		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	183	91.7	200	1.50		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/18/2025	Sampling Date:	02/17/2025
Reported:	02/20/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

**Sample ID: BS 25 - 44 1.5' (H250956-23)**

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	02/19/2025	ND	2.06	103	2.00	8.87		
Toluene*	<0.050	0.050	02/19/2025	ND	2.32	116	2.00	8.54		
Ethylbenzene*	<0.050	0.050	02/19/2025	ND	2.42	121	2.00	8.60		
Total Xylenes*	<0.150	0.150	02/19/2025	ND	7.45	124	6.00	9.59		
Total BTEX	<0.300	0.300	02/19/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/19/2025	ND	416	104	400	3.77		

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	02/19/2025	ND	183	91.7	200	0.260		
DRO >C10-C28*	<10.0	10.0	02/19/2025	ND	183	91.7	200	1.50		
EXT DRO >C28-C36	<10.0	10.0	02/19/2025	ND						

Surrogate: 1-Chlorooctane 97.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- QR-04 The RPD for the BS/BSD was outside of historical limits.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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

48-hour Rush

BILL TO

ANALYSIS REQUEST

Project Manager: Chad Hensley  
 Address: 3101 Boyd Drive  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: 575.725.5001 Fax #: 575.725.5001  
 Project #: 25E-00017 Project Owner: Colton Brown  
 Project Name: Brushy Draw 30-31 Federal Battery - North  
 Project Location: State: NM Zip: 88220  
 Phone #: 575-988-2390  
 Sampler Name: L. Pullman Fax #:  
 P.O. #: Company: XTO Energy, Inc.  
 Attn: Colton Brown  
 Address: 3104 E. Greene St  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: 575-988-2390 Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER					
HS0956	21 BS25-42 1.5'	C 1	1	X					02.17.25	10:50	X	X	X	
	22 BS25-43 1.5'	C 1	1	X					02.17.25	10:55	X	X	X	
	23 BS25-44 1.5'	C 1	1	X					02.17.25	11:00	X	X	X	

PLEASE NOTE: Labels and Design: Cardinal's labels and design's sealant comply with every other agency's standard for container for hazardous waste. Labels must be marked to the amount listed by the design. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for any actual or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]*  
 Date: 2-16-25  
 Time: 06:30  
 Received By: *[Signature]*  
 Date: 1-3-20  
 Time: 1:30  
 Observed Temp.: 1.1  
 Corrected Temp.: 1.4  
 Sample Condition: Cool Intact  
 Checked By: *[Signature]*  
 Verbal Result:  Yes  No  
 Add'l Phone #: \_\_\_\_\_  
 Please Email Results: Chad Hensley / (Chensley@vertexresource.com), Lakin Pullman (lpullman@vertexresource.com), Andrew Ludvik (ALudvik@vertexresource.com)  
 REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2027681371, Incident #: nAPP2431846528  
 Turnaround Time: *48hr*  
 Standard  Observed Temp.: *1.1*  
 Bacteria (only) Sample Condition:  Yes  No  
 Thermometer ID: *#146*  
 Correction Factor: *-0.3%*  
 Date: *2/18/25*  
 Cool Intact  Yes  No  
 Corrected Temp.: \_\_\_\_\_

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

3/3



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

February 26, 2025

CHAD HENSLEY  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/24/25 12:30.

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](http://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  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/24/2025	Sampling Date:	02/21/2025
Reported:	02/26/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER'	Sampling Condition:	Cool & Intact
Project Number:	24E-04918, 25E-00017	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

**Sample ID: BACKFILL (H251073-01)**

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	02/25/2025	ND	2.02	101	2.00	0.0537	
Toluene*	<0.050	0.050	02/25/2025	ND	2.04	102	2.00	5.63	
Ethylbenzene*	<0.050	0.050	02/25/2025	ND	2.10	105	2.00	9.82	
Total Xylenes*	<0.150	0.150	02/25/2025	ND	6.22	104	6.00	10.9	
Total BTEX	<0.300	0.300	02/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/25/2025	ND	432	108	400	3.64	

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	02/24/2025	ND	189	94.7	200	3.11	
DRO >C10-C28*	<10.0	10.0	02/24/2025	ND	179	89.6	200	3.60	
EXT DRO >C28-C36	<10.0	10.0	02/24/2025	ND					

Surrogate: 1-Chlorooctane 60.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 59.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

*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

48-hour Rush

BILL TO

ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

Project Manager: Chad Hensley

Address: 3101 Boyd Drive

City: Carlsbad State: NM Zip: 88220

Phone #: 575.725.5001 Fax #: 575.725.5001

Project #: 24E-04918, 25E-00017 Project Owner: Colton Brown

Project Name: Brushy Draw 30-31 Federal Battery

Project Location:

Sampler Name: L. Pullman

FOR LAB USE ONLY

Lab I.D.:

Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	BTEX (8021)	TPH:8015D(GRO / DRO / MRO)	Chloride
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H75 1073 1 Backfill	C	1	X					02.21.25	13:30	X	X	X	

PLEASE NOTE: Liability and Damages: Cardinal's liability and claims recede... (small print text)

Relinquished By: [Signature]

Date: 2-24-25

Time: 07:00

Received By: [Signature]

Date: 2-24-25

Time: 19:30

Observed Temp.: 3.4i

Corrected Temp.: 3-7i

Sample Condition: Cool Intact

Checked By: [Signature]

Turnaround Time: 48h

Thermometer ID: #113

Correction Factor: +0.3

Verbal Result: Yes No

Add'l Phone #:

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

February 26, 2025

CHAD HENSLEY  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: BRUSHY DRAW 30-31 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/24/25 12:30.

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](http://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". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 CHAD HENSLEY  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received:	02/24/2025	Sampling Date:	02/21/2025
Reported:	02/26/2025	Sampling Type:	Soil
Project Name:	BRUSHY DRAW 30-31 FEDERAL BATTER'	Sampling Condition:	Cool & Intact
Project Number:	24E-04918 ( NORTH )	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO		

**Sample ID: TOP SOIL (H251074-01)**

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	02/25/2025	ND	2.02	101	2.00	0.0537	
Toluene*	<0.050	0.050	02/25/2025	ND	2.04	102	2.00	5.63	
Ethylbenzene*	<0.050	0.050	02/25/2025	ND	2.10	105	2.00	9.82	
Total Xylenes*	<0.150	0.150	02/25/2025	ND	6.22	104	6.00	10.9	
Total BTEX	<0.300	0.300	02/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/25/2025	ND	432	108	400	3.64	

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	02/25/2025	ND	207	103	200	0.708	
DRO >C10-C28*	<10.0	10.0	02/25/2025	ND	203	101	200	0.592	
EXT DRO >C28-C36	<10.0	10.0	02/25/2025	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



## **APPENDIX D – Notification(s)**

**From:** [Hall, Brittany, EMNRD](#)  
**To:** [Chad Hensley](#)  
**Subject:** RE: [EXTERNAL] nAPP2431846528 sampling notice 432480 Variance.  
**Date:** Wednesday, February 19, 2025 8:22:09 AM

---

**Caution:** This email is from an external sender. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Mr. Hensley,

The variance request is approved. Submit a correct C-141N for nAPP2500254282 and include in the “necessary for navigation to sampling site” box, the directions to the site AND that a variance request was approved.

Please include a copy of this email chain in the next submittal.

Thank you,

**Brittany Hall** ● Environmental Specialist  
Environmental Bureau Projects Group  
EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87110  
505.517.5333 | [Brittany.Hall@emnrd.nm.gov](mailto:Brittany.Hall@emnrd.nm.gov)  
<http://www.emnrd.nm.gov/ocd/>

Effective 12/1/2024: OCD has updated guidance on karst potential occurrence zones. This notice can be found at: <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> under “2024 OCD ANNOUNCEMENTS AND NOTIFICATIONS”.

The Digital C-141 guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> or <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

---

**From:** Chad Hensley <CHensley@vertexresource.com>  
**Sent:** Wednesday, February 19, 2025 8:15 AM  
**To:** Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>  
**Subject:** [EXTERNAL] nAPP2431846528 sampling notice 432480 Variance.

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

Ms. Hall,

Vertex on behalf of ExxonMobil formally request a variance from 19.15.29.12 D.(1)(a) NMAC, “The responsible party must verbally notify the appropriate division district office two business days prior to conducting final sampling. If the division district office does not respond to the notice within the two business days, the responsible party may proceed with final sampling.

The responsible party may request a variance from this requirement upon a showing of good cause as determined by the division.” Request for sampling was given in error to the wrong incident number. Both incident numbers are at the same location, but the sampling notification is required for the incident number as depicted below:

Wrongly submitted request:

Incident number nAPP2431846528 with the approval given as seen in C-141N 432480.

Correct Incident number for sampling notification:

nAPP2500254282

Chad Hensley

Senior Project Manager

Cell: 575-200-6167

Vertex Resources Services Inc.

3101 Boyd Drive

Carlsbad, NM 88220



[www.vertex.ca](http://www.vertex.ca)

**Chad Hensley**

Senior Project Manager

Vertex Resource Services Inc.

Carlsbad, NM 88220

P

C 575.200.6167

F

[www.vertex.ca](http://www.vertex.ca)

Confidentiality Notice: This message and any attachments are solely for the intended recipient and may contain confidential or privileged information. If you are not the intended recipient, any disclosure, copying, use, or distribution of the information included in this message and any attachment is prohibited. If you have received this communication in error, please notify us by reply email and immediately and permanently delete this message and any attachments. Thank you.

# OSE POD 0.5 Miles



12/11/2024, 8:13:17 AM

GIS WATERS PODs

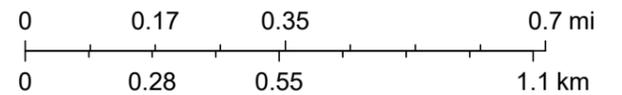
- Active
- Plugged
- 

Water Right Regulations

- Artesian Planning Area
- NHD Flowlines
- Stream River

OSE District Boundary

1:18,056



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

## Water Column/Average Depth to Water

				(quarters are smallest to largest)						(NAD83 UTM in meters)		(In feet)	(In feet)	(In feet)		
POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Distance	Well Depth	Depth Water	Water Column
<a href="#">C 03782 POD1</a>		CUB	ED	SE	SW	SW	28	25S	30E	604525.7	3551444.2		2522	805	277	528
<a href="#">C 01360</a>		CUB	ED	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3142	770	173	597
<a href="#">C 04705 POD1</a>		CUB	ED	NE	NW	NE	35	25S	29E	598866.5	3551191.8		3155			
<a href="#">C 01361</a>		CUB	ED	SW	SE	SW	05	26S	30E	603240.4	3548157.5		3221	775	184	591
<a href="#">C 03581 POD1</a>		CUB	ED	SE	SE	SE	05	26S	30E	604298.2	3548291.8		3646	800	320	480
<a href="#">C 03483</a>		C	ED	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3676	700	200	500
<a href="#">C 04558 POD1</a>		CUB	ED	SW	SE	SW	23	25S	29E	598353.7	3553039.4		4130			
<a href="#">C 04529 POD1</a>		CUB	ED	NW	SW	NW	18	25S	30E	601076.9	3555733.7		4689			
<a href="#">C 04755 POD2</a>		CUB	ED	SE	NW	SW	12	26S	29E	599857.0	3546955.1		4711	25		
<a href="#">C 04720 POD1</a>		CUB	ED	SE	NW	SW	12	26S	29E	599807.3	3546968.8		4722			
<a href="#">C 04755 POD1</a>		CUB	ED	SE	NW	SW	12	26S	29E	599787.4	3546971.4		4729	40		
<a href="#">C 04720 POD4</a>		CUB	ED	SE	NW	SW	12	26S	29E	599812.4	3546955.0		4732			
<a href="#">C 04720 POD2</a>		CUB	ED	SE	NW	SW	12	26S	29E	599835.7	3546932.1		4741			
<a href="#">C 04720 POD3</a>		CUB	ED	SE	NW	SW	12	26S	29E	599835.7	3546932.1		4741			
<a href="#">C 04720 POD5</a>		CUB	ED	SE	NW	SW	12	26S	29E	599840.0	3546920.4		4750	20		
<a href="#">C 04720 POD6</a>		CUB	ED	SE	NW	SW	12	26S	29E	599857.7	3546880.9		4777	31		
<a href="#">C 04755 POD3</a>		CUB	ED	SE	NW	SW	12	26S	29E	599747.8	3546862.3		4844	103		

Average Depth to Water: **230 feet**

Minimum Depth: **173 feet**

Maximum Depth: **320 feet**

**Record Count:** 17

**UTM Filters (in meters):**

**Easting:** 602022

**Northing:** 3551140

**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.

---

12/11/24 6:21 AM MST

Water Column/Average Depth to Water

©2024 New Mexico Office of the State Engineer, All Rights Reserved. | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Home](#) |

## 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 03782	POD1	SE	SW	SW	28	25S	30E	604525.7	3551444.2	

\* UTM location was derived from PLSS - see Help

**Driller** 331      **Driller Company:** SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.  
**License:**

**Driller Name:** STEWART, JOEL H.

**Drill Start Date:** 2015-01-16      **Drill Finish Date:** 2015-01-17      **Plug Date:**

**Log File Date:** 2015-02-19      **PCW Rcv Date:**      **Source:** Artesian

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

**Casing Size:** 8.63      **Depth Well:** 805      **Depth Water:** 277

### Water Bearing Stratifications:

Top	Bottom	Description
260	320	Sandstone/Gravel/Conglomerate
320	380	Sandstone/Gravel/Conglomerate
380	410	Sandstone/Gravel/Conglomerate
410	530	Shale/Mudstone/Siltstone
530	590	Shale/Mudstone/Siltstone
590	600	Shale/Mudstone/Siltstone
600	630	Shale/Mudstone/Siltstone
630	650	Shale/Mudstone/Siltstone
650	700	Shale/Mudstone/Siltstone
700	710	Shale/Mudstone/Siltstone
710	760	Shale/Mudstone/Siltstone
760	770	Shale/Mudstone/Siltstone

Top	Bottom	Description
770	780	Shale/Mudstone/Siltstone
780	790	Shale/Mudstone/Siltstone
790	805	Shale/Mudstone/Siltstone

---

### Casing Perforations:

Top	Bottom
270	805

---

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

12/11/24 6:57 AM MST

Point of Diversion Summary

©2024 New Mexico Office of the State Engineer, All Rights Reserved. | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Home](#) |

# Water Right Summary



[get image list](#)

<b>WR File Number:</b>	C 03782	<b>Subbasin:</b>	CUB	<b>Cross Reference:</b>	
<b>Primary Purpose:</b>	EXP EXPLORATION				
<b>Primary Status:</b>	PMT Permit				
<b>Total Acres:</b>		<b>Subfile:</b>		<b>Header:</b>	
<b>Total Diversion:</b>	0.000	<b>Cause/Case:</b>			
<b>Owner:</b>	ATKINS ENGR ASSOC INC				
<b>Contact:</b>	CHRIS CORTEZ				
<b>Owner:</b>	BOPCO, L.P.				
<b>Contact:</b>	BRIAN PREGGER				

## Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
<a href="#">_get_images</a>	<a href="#">555125</a>	EXPL	2014-11-14	PMT	LOG	C 03782	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
<a href="#">C 03782.POD1</a>		Artesian	SE	SW	SW	28	25S	30E	604525.7	3551444.2		2/3 MILE SW OF HEDGEHOG ROAD

\* UTM location was derived from PLSS - see Help

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

12/11/24 6:59 AM MST

Water Rights Summary

©2024 New Mexico Office of the State Engineer, All Rights Reserved. | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Home](#) |



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) POD-1 <i>Renumbered C-3832-POD 2</i>			OSE FILE NUMBER(S) C 3782 ( <i>exploratory</i> ) <i>Renumbered C-3832</i>		
	WELL OWNER NAME(S) BOPCO, L.P.			PHONE (OPTIONAL) (817) 390-8662		
	WELL OWNER MAILING ADDRESS 201 N Main St Suite 2900			CITY Fort Worth	STATE TX	ZIP 76102
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 05	SECONDS 40.1	* ACCURACY REQUIRED: ONE TENTH OF A SECOND	
		LONGITUDE 103	53	32.2	* DATUM REQUIRED: WGS 84	
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SW1/4SE1/4SW1/4SW1/4 of Section 28, Township 25 South, Range 30 East, in the NE corner of a well pad.						

2. DRILLING & CASING INFORMATION	LICENSE NUMBER 331	NAME OF LICENSED DRILLER Joel H. Stewart			NAME OF WELL DRILLING COMPANY SBQ Drilling, LLC			
	DRILLING STARTED 01-16-15	DRILLING ENDED 01-17-15	DEPTH OF COMPLETED WELL (FT) 805	BORE HOLE DEPTH (FT) ±805	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input checked="" type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 277			
	DRILLING FLUID: <input type="radio"/> AIR <input checked="" type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> 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	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	270	14.75	AS1M A53B	Welded	8.625	0.322	STATE ENGINEER OFFICE FEB 19 PM 2:35
	270	805	14.75	304 Stainless Steel	Welded	8.625	0.25	
	0	15	19	AS1M A53B	---	16	0.25	

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				
	0	120	14.75	Sand Mix Ready Mix	90.36	grav. tremie meas.
	120	170	14.75	Hydrated Bentonite Chips	35.90	grav. tremie meas.
	170	805	14.75	6/9 Silica Sand	455.95	I remie Pipe

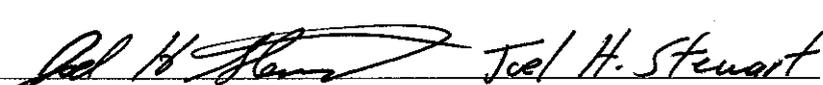
FOR USE INTERNAL USE <i>Renumbered from C-3782-POD1</i>			WR-20 WELL RECORD & LOG (Version 06/08/2012)		
FILE NUMBER <i>C-3832</i>	POD NUMBER <i>POD 2</i>	TRN NUMBER <i>555125</i>			
LOCATION <i>25.30.28.3343</i>					PAGE 1 OF 2

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	30	30	Cemented Sand, light tan, sub-angular	<input type="radio"/> Y <input type="radio"/> N	
30	40	10	Sandy Silt, light brown, sub-angular	<input type="radio"/> Y <input type="radio"/> N	
40	60	20	Sandy clay, reddish brown	<input type="radio"/> Y <input type="radio"/> N	
60	80	20	Silty Sand, light brown, sub-angular	<input type="radio"/> Y <input type="radio"/> N	
80	250	170	Fine to Medium Sand, light tan, sub-angular to rounded	<input type="radio"/> Y <input type="radio"/> N	
250	260	10	Clayey Sand, brown, sub-angular	<input type="radio"/> Y <input type="radio"/> N	
260	320	60	Fine Sand, light tan, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
320	380	60	Silty Sand, brownish gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
380	410	30	Fine Sand, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
410	530	120	Clayey Fine Sand, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
530	590	60	Sandy Clay, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
590	600	10	Clayey Fine Sand, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
600	630	30	Sandy Clay, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
630	650	20	Clayey Sand, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
650	700	50	Sandy Clay, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
700	710	10	Clayey Sand, brown and gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
710	760	50	Sandy Clay, dark gray, sub-angular	<input checked="" type="radio"/> Y <input type="radio"/> N	
760	770	10	Clay, 75% gray, 25% red	<input checked="" type="radio"/> Y <input type="radio"/> N	
770	780	10	Clay, 50% gray, 50% red	<input checked="" type="radio"/> Y <input type="radio"/> N	
780	790	10	Clay, 25% gray, 75% red	<input checked="" type="radio"/> Y <input type="radio"/> N	
790	805	15	Sandy Clay, Grayish red, 10% white sand.	<input checked="" type="radio"/> Y <input type="radio"/> N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="radio"/> PUMP <input type="radio"/> AIR LIFT <input type="radio"/> BAILER <input checked="" type="radio"/> OTHER - SPECIFY: TBD by pump test				TOTAL ESTIMATED WELL YIELD (gpm): TBD	

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: Pump test will be performed at a later time. Hydrated Bentonite Chips and Sand Mix Ready Mix were placed by gravity and tagged with tremie pipe.	
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Silverio Galindo, Gabriel Armijo, Pedro Pizano	

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER / PRINT SIGNEE NAME	2-13-15 DATE

STATE ENGINEER OFFICE  
 605 W. WELL, NEW MEXICO  
 2015 FEB 19 PM 2:35

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	C-3832	POD NUMBER	PAD 2
LOCATION	25.30.28.3343	TRN NUMBER	555125
			PAGE 2 OF 2

**Locator Tool Report**

**General Information:**

Application ID:27                      Date: 05-28-2015                      Time: 12:01:24

WR File Number: C-03782-POD1  
Purpose: POINT OF DIVERSION

Applicant First Name: BOPCO EXPLORATORY WELL DRILLERS RECORD  
Applicant Last Name: RENUMBERED C-3832-POD2

GW Basin: CARLSBAD  
County: EDDY

Critical Management Area Name(s): NONE  
Special Condition Area Name(s): NONE  
Land Grant Name: NON GRANT

**PLSS Description (New Mexico Principal Meridian):**

SW 1/4 of SE 1/4 of SW 1/4 of SW 1/4 of Section 28, Township 25S, Range 30E.

**Coordinate System Details:**

**Geographic Coordinates:**

Latitude:        32 Degrees    5 Minutes    40.1 Seconds    N  
Longitude:      103 Degrees   53 Minutes   32.2 Seconds    W

**Universal Transverse Mercator Zone: 13N**

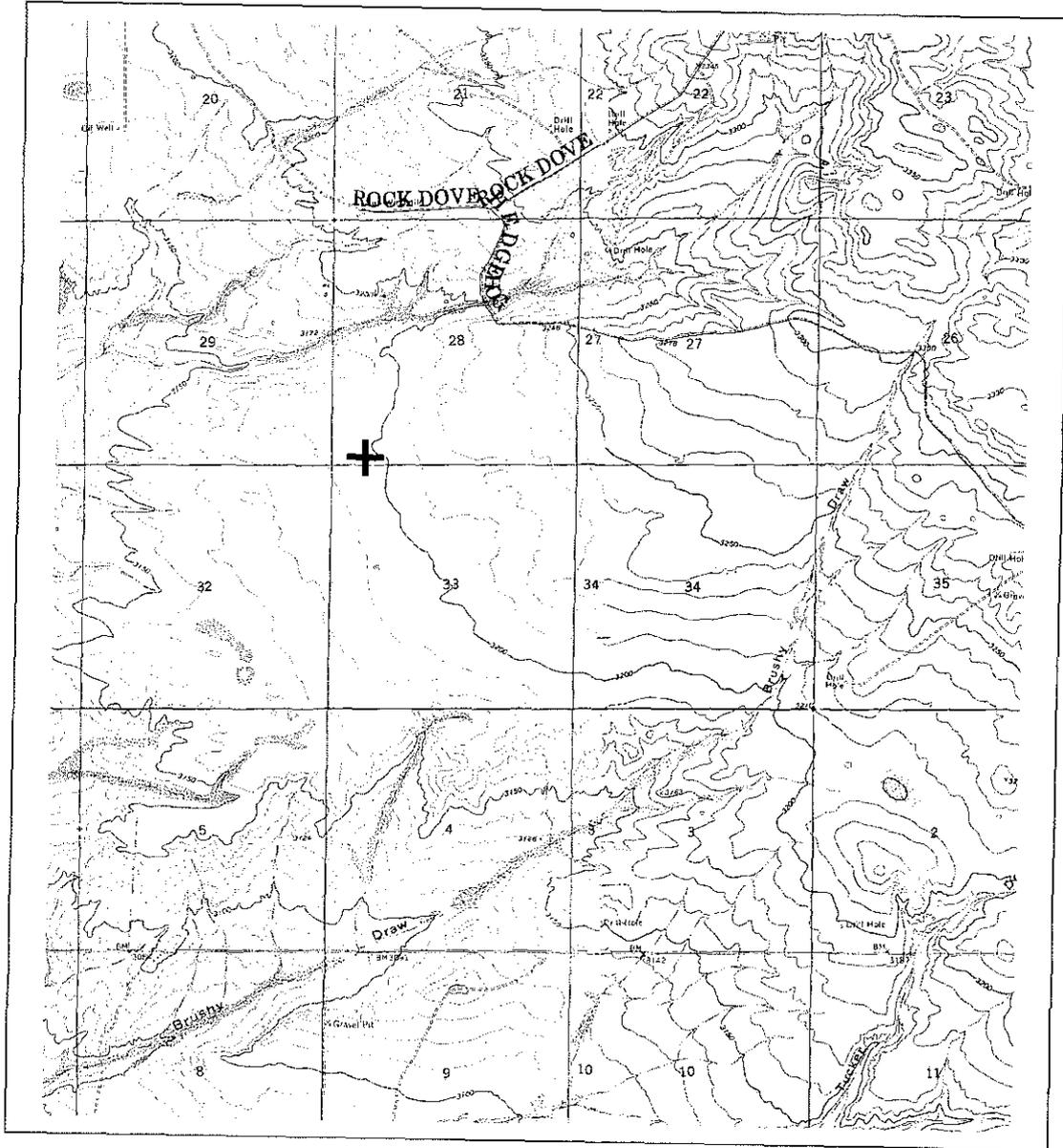
NAD 1983(92) (Meters)	N: 3,551,444	E: 604,526
NAD 1983(92) (Survey Feet)	N: 11,651,697	E: 1,983,348
NAD 1927 (Meters)	N: 3,551,243	E: 604,573
NAD 1927 (Survey Feet)	N: 11,651,036	E: 1,983,505

**State Plane Coordinate System Zone: New Mexico East**

NAD 1983(92) (Meters)	N: 121,428	E: 206,630
NAD 1983(92) (Survey Feet)	N: 398,385	E: 677,920
NAD 1927 (Meters)	N: 121,410	E: 194,077
NAD 1927 (Survey Feet)	N: 398,327	E: 636,734

# NEW MEXICO OFFICE OF STATE ENGINEER

## Locator Tool Report



WR File Number: C-03782-POD1 Scale: 1:47,832

Northing/Easting: UTM83(92) (Meter): N: 3,551,444

E: 604,526

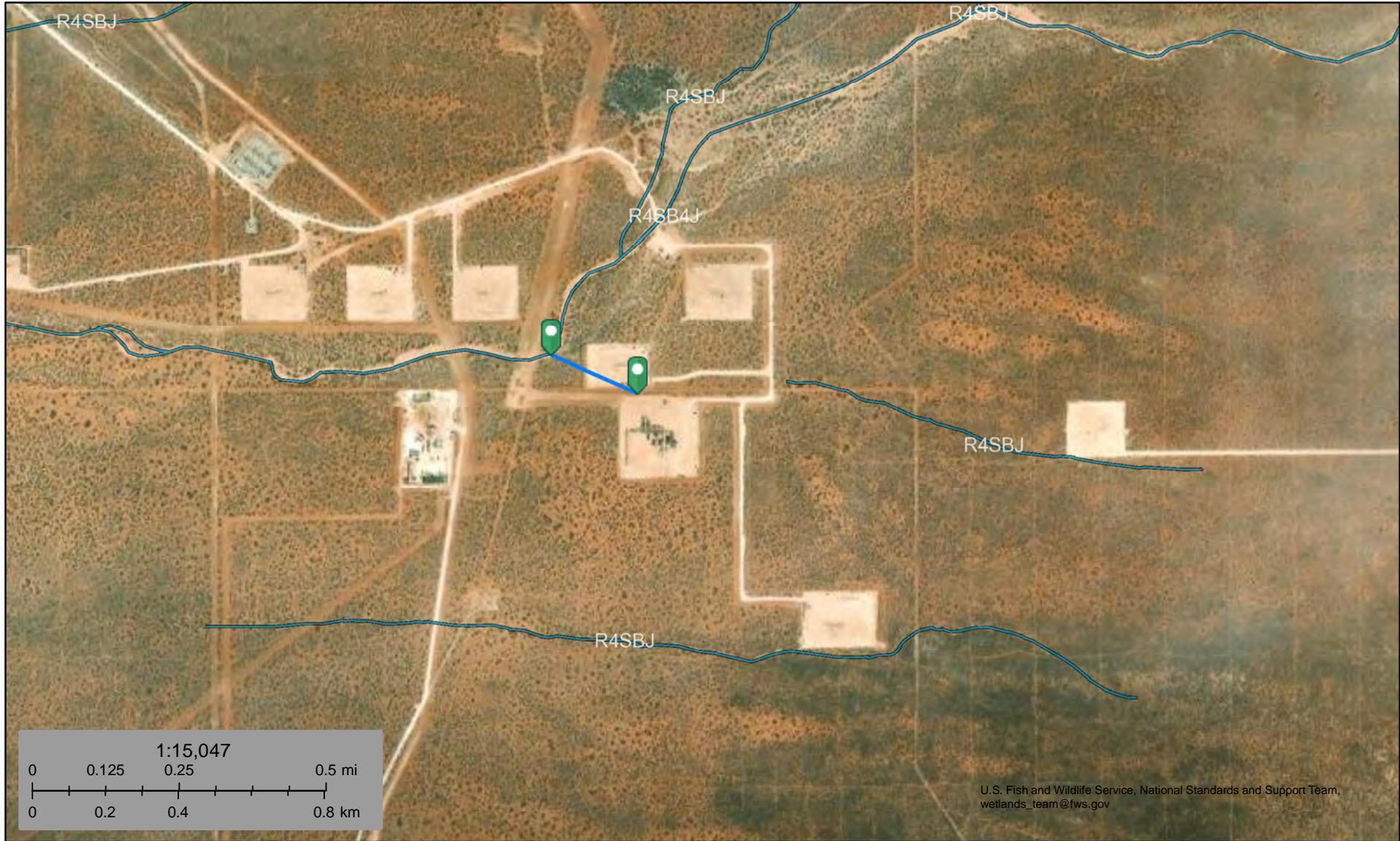
Northing/Easting: SPCS83(92) (Feet): N: 398,385

E: 677,920

GW Basin: Carlsbad



# Intermittent 720 feet



December 11, 2024

### Wetlands

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

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



**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

Pond 16,426 feet



December 11, 2024

**Wetlands**

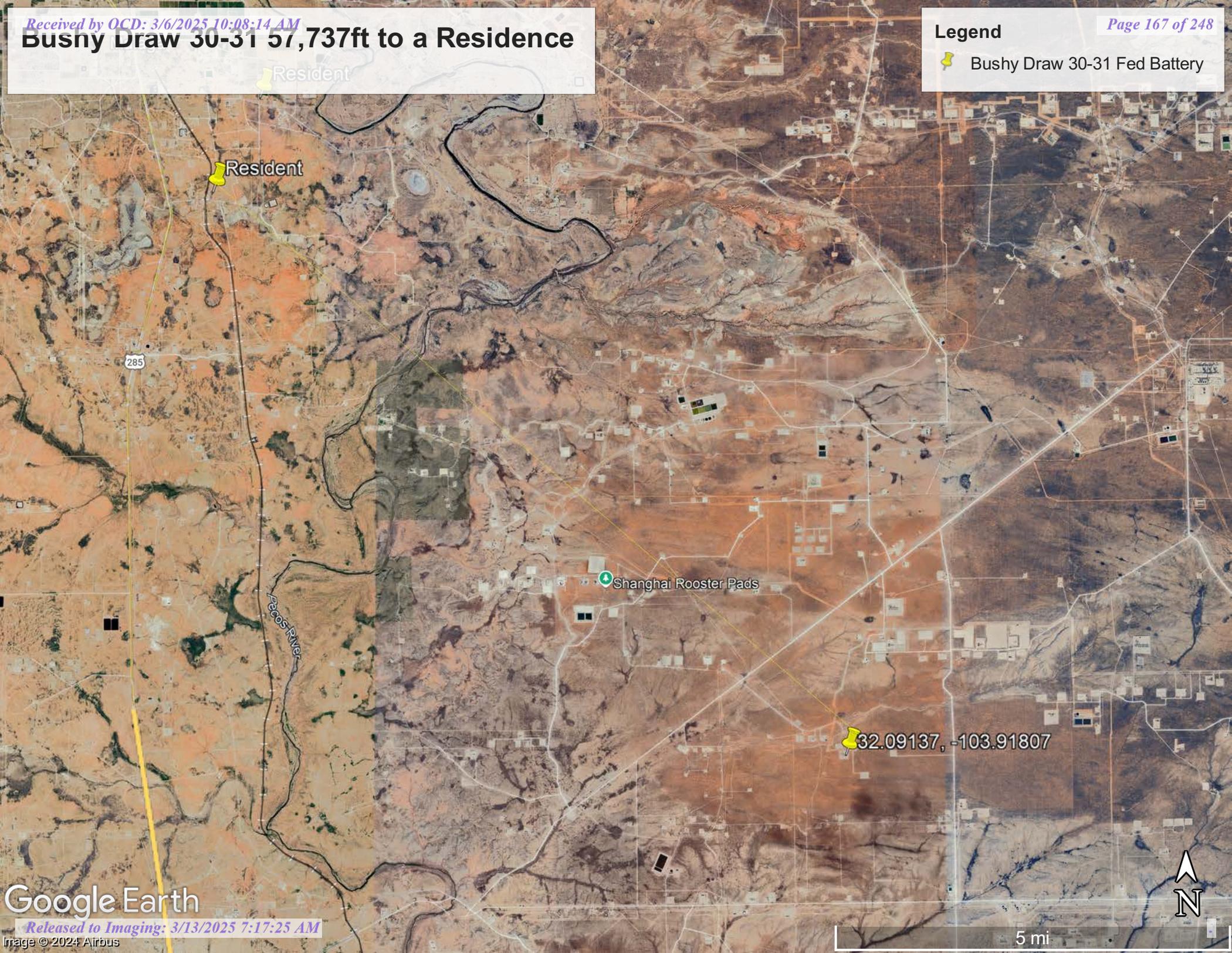
- |  |   |  |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland       |  Lake     |
|  Estuarine and Marine Wetland   |  Freshwater Forested/Shrub Wetland |  Other    |
|  |  Freshwater Pond                   |  Riverine |

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.

# Bushy Draw 30-31 57,737ft to a Residence

## Legend

-  Bushy Draw 30-31 Fed Battery



Resident

Shanghai Rooster Pads

32.09137, -103.91807

Pecos River

285



### Active & Inactive Points of Diversion (with Ownership Information)

WR File Nbr	Sub basin	Use	Diversions	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	
											q64	q16	q4	Sec	Tws	Range	X			Y
<a href="#">C 04394</a>	CUB	MON	0.000	XTO ENERGY INC	ED	<a href="#">C 04394 POD1</a>	NA			SW	NE	SE	19	25S	30E	602315.9	3553464.1		2,342.6	
<a href="#">C 03782</a>	CUB	EXP	0.000	BOPCO, L.P.	ED	<a href="#">C 03782 POD1</a>				Artesian	SE	SW	SW	28	25S	30E	604525.7	3551444.2		2,522.1
<a href="#">C 01360</a>	CUB	IND	0.000	EL PASO NATURAL GAS	ED	<a href="#">C 01360</a>				Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3,142.9
<a href="#">C 03448</a>	C	PRO	0.000	DEVON ENERGY CORP.	ED	<a href="#">C 01360</a>				Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3,142.9
<a href="#">C 03449</a>	C	PRO	0.000	OGX RESOURCES	ED	<a href="#">C 01360</a>				Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		3,142.9
<a href="#">C 04705</a>	CUB	MON	0.000	DEVON ENERGY	ED	<a href="#">C 04705 POD1</a>	NA				NE	NW	NE	35	25S	29E	598866.5	3551191.8		3,155.9
<a href="#">C 01361</a>	CUB	IND	0.000	EL PASO NATURAL GAS	ED	<a href="#">C 01361</a>				Shallow	SW	SE	SW	05	26S	30E	603240.4	3548157.5		3,221.8
<a href="#">C 03581</a>	CUB	EXP	0.000	JANEY LOREE PASCHAL	ED	<a href="#">C 03581 POD1</a>				Shallow	SE	SE	SE	05	26S	30E	604298.2	3548291.8		3,646.0
<a href="#">C 03608</a>	C	PRO	0.000	DEVON ENERGY CORP.	ED	<a href="#">C 03581 POD1</a>				Shallow	SE	SE	SE	05	26S	30E	604298.2	3548291.8		3,646.0
<a href="#">C 04612</a>	C	STK	3.000	JANEY LOREE PASCHALL DBA PASCHAL RANCH LLC	ED	<a href="#">C 04612 C-3581</a>	NA				SE	SE	SE	05	26S	30E	604298.2	3548291.8		3,646.0
<a href="#">C 03483</a>	C	STK	3.000	PASCHAL RANCH LLC	ED	<a href="#">C 03483</a>				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
<a href="#">C 03501</a>	C	PRO	0.000	DEVON ENERGY CO.	ED	<a href="#">C 03483</a>				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
<a href="#">C 03502</a>	C	PRO	0.000	DEVON ENERGY CO	ED	<a href="#">C 03483</a>				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
<a href="#">C 03503</a>	C	PRO	0.000	DEVON ENERGY CO.	ED	<a href="#">C 03483</a>				Shallow	SE	SE	SE	05	26S	30E	604296.3	3548251.4		3,676.5
<a href="#">C 03483</a>	C	STK	3.000	PASCHAL RANCH LLC	ED	<a href="#">C 03483 POD3</a>					SE	SW	SW	04	26S	30E	604557.8	3548291.0		3,814.1
					ED	<a href="#">C 03483 POD2</a>					SW	SW	04	26S	30E	604565.8	3548253.6		3,847.4	
<a href="#">C 04851</a>	CUB	MON	0.000	COG OPERATING LLC	ED	<a href="#">C 04851 POD1</a>	NA				NW	NE	NW	24	25S	29E	599946.3	3554519.9		3,966.4
<a href="#">C 02441</a>	C	STK	0.000	BYRON W PASCHAL	ED	<a href="#">C 02441</a>								21	25S	30E	605077.0	3553783.0 *		4,039.6
<a href="#">C 04758</a>	CUB	MON	0.000	XTO ENERGY, INC.	ED	<a href="#">C 04758 POD1</a>	NA				SE	SE	SE	17	25S	30E	604096.5	3554651.8		4,078.8
<a href="#">C 04558</a>	CUB	MON	0.000	XTO ENERGY INC	ED	<a href="#">C 04558 POD1</a>	NA				SW	SE	SW	23	25S	29E	598353.7	3553039.4		4,130.9
<a href="#">C 04730</a>	CUB	MON	0.000	XTO ENERGY, INC	ED	<a href="#">C 04730 POD1</a>	NA				SW	SW	NW	27	25S	30E	606032.8	3552256.2		4,163.2
<a href="#">C 04529</a>	CUB	MON	0.000	XTO ENERGY INC	ED	<a href="#">C 04529 POD1</a>	NA				NW	SW	NW	18	25S	30E	601076.9	3555733.7		4,689.9
<a href="#">C 04755</a>	CUB	MON	0.000	DEVON ENERGY	ED	<a href="#">C 04755 POD2</a>	NA				SE	NW	SW	12	26S	29E	599857.0	3546955.1		4,711.8
<a href="#">C 04720</a>	CUB	EXP	0.000	DEVON ENERGY	ED	<a href="#">C 04720 POD1</a>	NA				SE	NW	SW	12	26S	29E	599807.3	3546968.8		4,722.7
<a href="#">C 04755</a>	CUB	MON	0.000	DEVON ENERGY	ED	<a href="#">C 04755 POD1</a>	NA				SE	NW	SW	12	26S	29E	599787.4	3546971.4		4,729.8
<a href="#">C 04720</a>	CUB	EXP	0.000	DEVON ENERGY	ED	<a href="#">C 04720 POD4</a>	NA				SE	NW	SW	12	26S	29E	599812.4	3546955.0		4,732.5
					ED	<a href="#">C 04720 POD2</a>	NA				SE	NW	SW	12	26S	29E	599835.7	3546932.1		4,742.0
					ED	<a href="#">C 04720 POD3</a>	NA				SE	NW	SW	12	26S	29E	599835.7	3546932.1		4,742.0
					ED	<a href="#">C 04720 POD5</a>	NA				SE	NW	SW	12	26S	29E	599840.0	3546920.4		4,750.4
					ED	<a href="#">C 04720 POD6</a>	NA				SE	NW	SW	12	26S	29E	599857.7	3546880.9		4,777.5
<a href="#">C 04755</a>	CUB	MON	0.000	DEVON ENERGY	ED	<a href="#">C 04755 POD3</a>	NA				SE	NW	SW	12	26S	29E	599747.8	3546862.3		4,844.7

Record Count: 31

Filters Applied:

UTM Filters (in meters):

Eastings: 602022

Northings: 3551140

# 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 01360	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

\* UTM location was derived from PLSS - see Help

**Driller License:** 95      **Driller Company:** FOLK DRILLING CO.

**Driller Name:**

**Drill Start Date:** 1952-04-26      **Drill Finish Date:** 1952-05-15      **Plug Date:**

**Log File Date:** 1953-11-17      **PCW Rcv Date:**      **Source:** Shallow

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

**Casing Size:** 12.75      **Depth Well:** 770      **Depth Water:** 173

## Water Bearing Stratifications:

Top	Bottom	Description
210	220	Sandstone/Gravel/Conglomerate
580	585	Sandstone/Gravel/Conglomerate
665	710	Sandstone/Gravel/Conglomerate
725	770	Sandstone/Gravel/Conglomerate

## Casing Perforations:

Top	Bottom
180	289
538	770

## Meter Information

<b>Meter Number:</b>	16557	<b>Meter Make:</b>	SIEMENS
<b>Meter Serial Number:</b>	L1254823	<b>Meter Multiplier:</b>	100.0000
<b>Number of Dials:</b>	8	<b>Meter Type:</b>	Diversion
<b>Unit of Measure:</b>	Gallons	<b>Reading Frequency:</b>	Quarterly

**Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2014-07-01	2014	234997.000	A	RPT		0.000	
2014-09-30	2014	354169.000	A	RPT		36.573	
2014-11-20	2014	7281000.000	A	RPT		0.000	
2014-12-31	2014	11430100.000	A	RPT		12.733	
2015-04-01	2015	22535200.000	A	RPT		34.080	
2015-07-01	2015	35821800.000	A	RPT		40.775	
2015-10-05	2015	46631200.000	A	RPT		33.173	
2015-12-31	2015	55653200.000	A	RPT		27.688	
2016-01-31	2016	58047600.000	A	RPT		7.348	
2016-02-29	2016	61081100.000	A	RPT		9.309	
2016-03-31	2016	62593100.000	A	RPT		4.640	
2016-06-30	2016	71642600.000	A	RPT		27.772	
2016-10-03	2016	81998399.000	A	RPT		31.781	
2016-12-31	2016	90558600.000	A	RPT		26.270	
2019-04-04	2019	164290087.000	A	RPT		226.274	
2019-10-02	2019	790380.000	A	RPT	METER CHANGE OUT 07/2019	0.000	
2020-01-02	2020	1733720.000	A	RPT		289.500	
2021-04-07	2021	36814117.000	A	WEB		10765.779	X
2021-07-27	2021	36836238.000	A	WEB		6.789	X
2021-10-04	2021	36844496.000	A	WEB		2.534	X
2021-12-31	2021	36847463.000	A	WEB		0.911	X

**YTD Meter Amounts:**

Year	Amount
2014	49.306
2015	135.716
2016	107.120

Year	Amount
2019	226.274
2020	289.500
2021	10776.013

**Meter Information**

<b>Meter Number:</b>	16558	<b>Meter Make:</b>	MASTERMETER
<b>Meter Serial Number:</b>	32530403	<b>Meter Multiplier:</b>	100.0000
<b>Number of Dials:</b>	6	<b>Meter Type:</b>	Diversion
<b>Unit of Measure:</b>	Gallons	<b>Reading Frequency:</b>	Monthly (No Reading Expected)

**Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2014-10-01	2014	354169.000	A	RPT		0.000	
2014-11-20	2014	415555.000	A	RPT		18.839	
2014-11-21	2014	72810.000	A	RPT		0.000	
2014-12-31	2014	112178.000	A	RPT		12.082	
2015-02-01	2015	147039.000	A	RPT		10.698	
2015-03-02	2015	188133.000	A	RPT		12.611	
2015-04-01	2015	224102.000	A	RPT		11.038	
2015-04-30	2015	270723.000	A	RPT		14.307	
2015-05-31	2015	315628.000	A	tw		13.781	
2015-07-01	2015	369075.000	A	tw		16.402	
2015-08-01	2015	395528.000	A	tw		8.118	
2015-08-31	2015	455361.000	A	tw		18.362	
2015-10-01	2015	466312.000	A	RPT		3.361	

**YTD Meter Amounts:**

Year	Amount
2014	30.921
2015	108.678

---

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

---

12/11/24 8:01 AM MST

Point of Diversion Summary

©2024 New Mexico Office of the State Engineer, All Rights Reserved. | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Home](#) |

# Water Right Summary



[get image list](#)

<b>WR File Number:</b>	C 01360	<b>Subbasin:</b>	CUB	<b>Cross Reference:</b>	
<b>Primary Purpose:</b>	IND INDUSTRIAL				
<b>Primary Status:</b>	DCL Declaration				
<b>Total Acres:</b>	0.000	<b>Subfile:</b>	<b>Header:</b>		
<b>Total Diversion:</b>	0.000	<b>Cause/Case:</b>			
<b>Owner:</b>	EL PASO NATURAL GAS				
<b>Contact:</b>	PAULA JOY				

## Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
<a href="#">460091</a>		COWNF	2010-05-26	CHG	PRC	C 01360	T	0.000	0.000	
<a href="#">203459</a>		DCL	1953-11-17	DCL	PRC	C 01360	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
<a href="#">C_01360</a>		Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

\* UTM location was derived from PLSS - see Help

## Place of Use

Q256	Q64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0.000	0.000		IND		DCL	NO PLACE OF USE GIVEN.

## Source

Acres	Diversion	CU	Use	Priority	Source	Description
0.000	0.000		IND		GW	

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.

# Water Right Summary



[get image list](#)

<b>WR File Number:</b>	C 03448	<b>Subbasin:</b>	C	<b>Cross Reference:</b>	
<b>Primary Purpose:</b>	PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE				
<b>Primary Status:</b>	PMT Permit				
<b>Total Acres:</b>		<b>Subfile:</b>		<b>Header:</b>	
<b>Total Diversion:</b>	0.000	<b>Cause/Case:</b>			
<b>Owner:</b>	DEVON ENERGY CORP.				
<b>Contact:</b>	SCOTT GREGORY				

## Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
<a href="#">get images</a>	<a href="#">461570</a>	72121	2010-06-29	PMT	APR	C 03448	T		3.000	

## Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
<a href="#">C 01360</a>		Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

\* UTM location was derived from PLSS - see Help

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

12/11/24 8:07 AM MST

Water Rights Summary

©2024 New Mexico Office of the State Engineer, All Rights Reserved. | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Home](#) |

# Water Right Summary



[get image list](#)

<b>WR File Number:</b>	C 03449	<b>Subbasin:</b>	C	<b>Cross Reference:</b>
<b>Primary Purpose:</b>	PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE			
<b>Primary Status:</b>	PMT Permit			
<b>Total Acres:</b>		<b>Subfile:</b>	<b>Header:</b>	
<b>Total Diversion:</b>	0.000	<b>Cause/Case:</b>		
<b>Owner:</b>	OGX RESOURCES			
<b>Contact:</b>	SCOTT GREGORY			

## Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
<a href="#">get images</a>	<a href="#">461594</a>	72121	2010-06-29	EXP	EXP	C 03449	T		3.000	

## Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
<a href="#">C 01360</a>		Shallow	SE	SW	SW	05	26S	30E	602996.6	3548152.0		

\* UTM location was derived from PLSS - see Help

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

12/11/24 8:08 AM MST

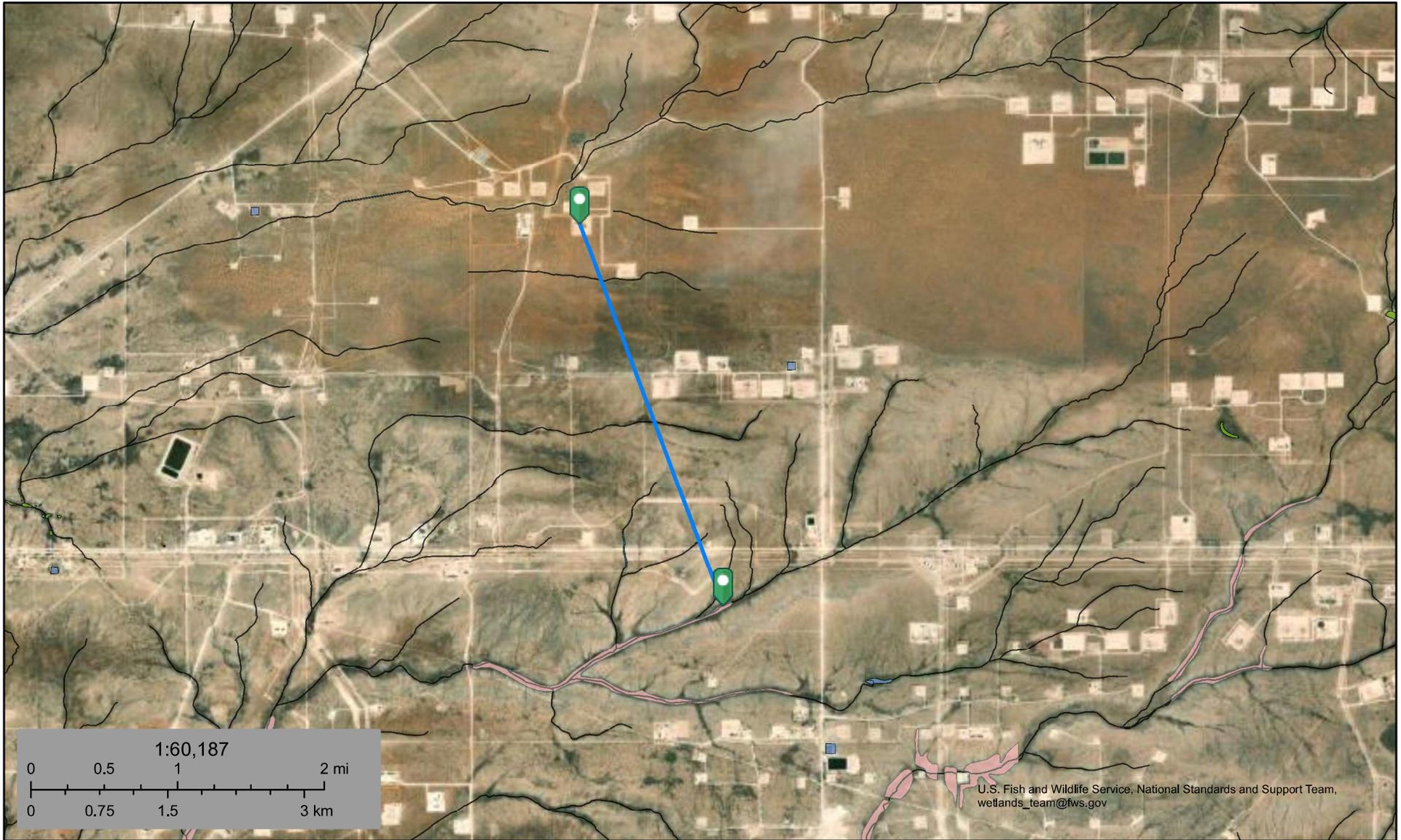
Water Rights Summary

©2024 New Mexico Office of the State Engineer, All Rights Reserved. | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Home](#) |



U.S. Fish and Wildlife Service  
National Wetlands Inventory

Wetland 12,393 feet



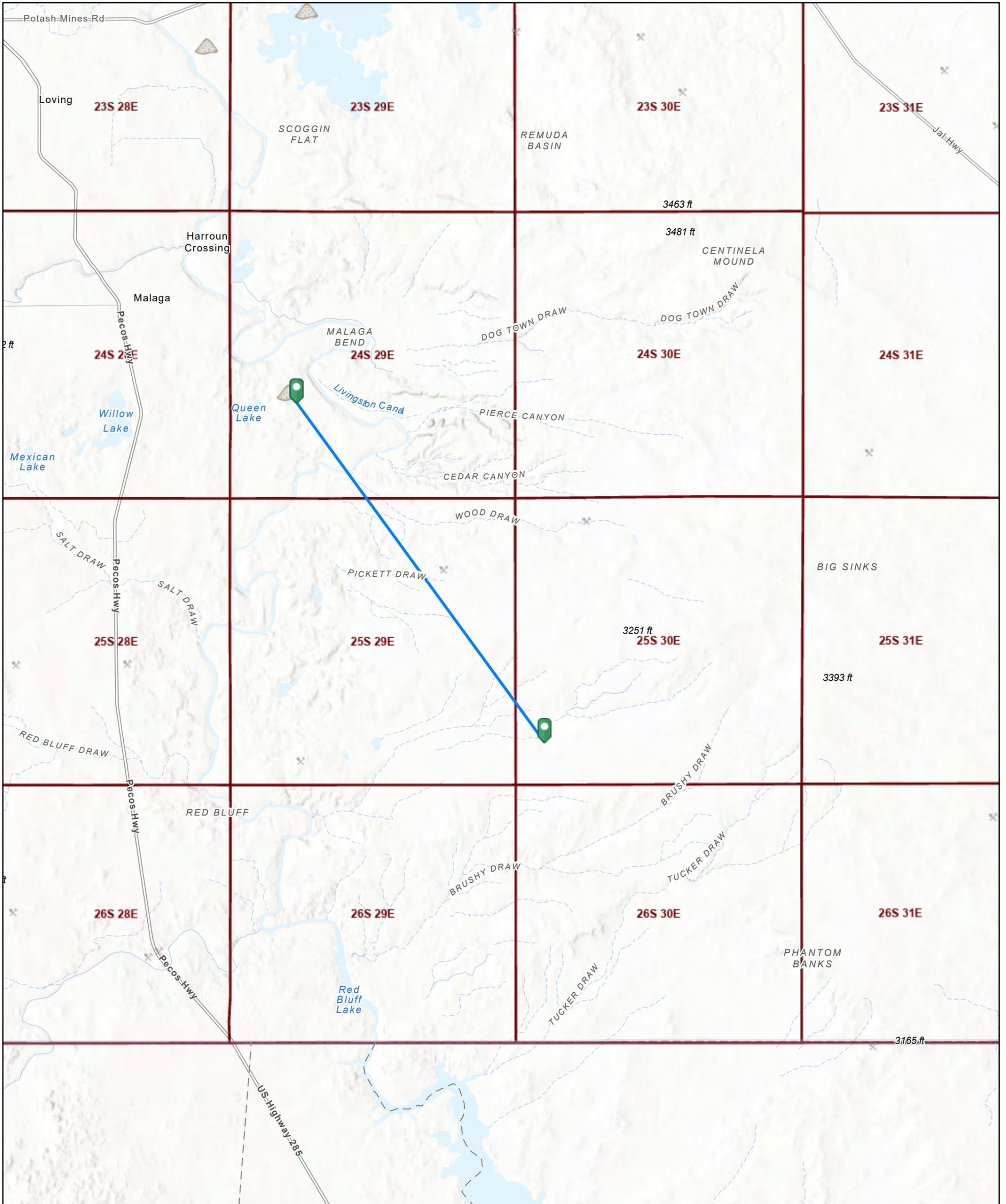
December 11, 2024

**Wetlands**

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

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

# Salt Mine 46,820 feet

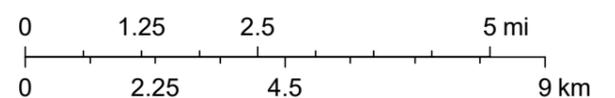


12/11/2024, 10:47:54 AM

Registered Mines

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

1:144,448



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

# Brushy Draw 30-31 Fed Battery

Karst Potential

## Legend

-  Brushy Draw 30-31 Fed Battery Release
-  High Karst Potential
-  Medium Karst Potential
-  Nearest High Karst 20,253 feet (3.84 miles)
-  Nearest Medium Karst 6,050 feet (1.15 miles)

Shanghai Rooster Pads

Brushy Draw 30-31 Fed Battery Release



# National Flood Hazard Layer FIRMette



103°55'24"W 32°5'44"N



Eddy County  
350120  
AREA OF MINIMAL FLOOD HAZARD  
Zone X  
35015C1875D  
eff. 6/4/2010

## Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		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 <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
OTHER FEATURES		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°54'46"W 32°5'14"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

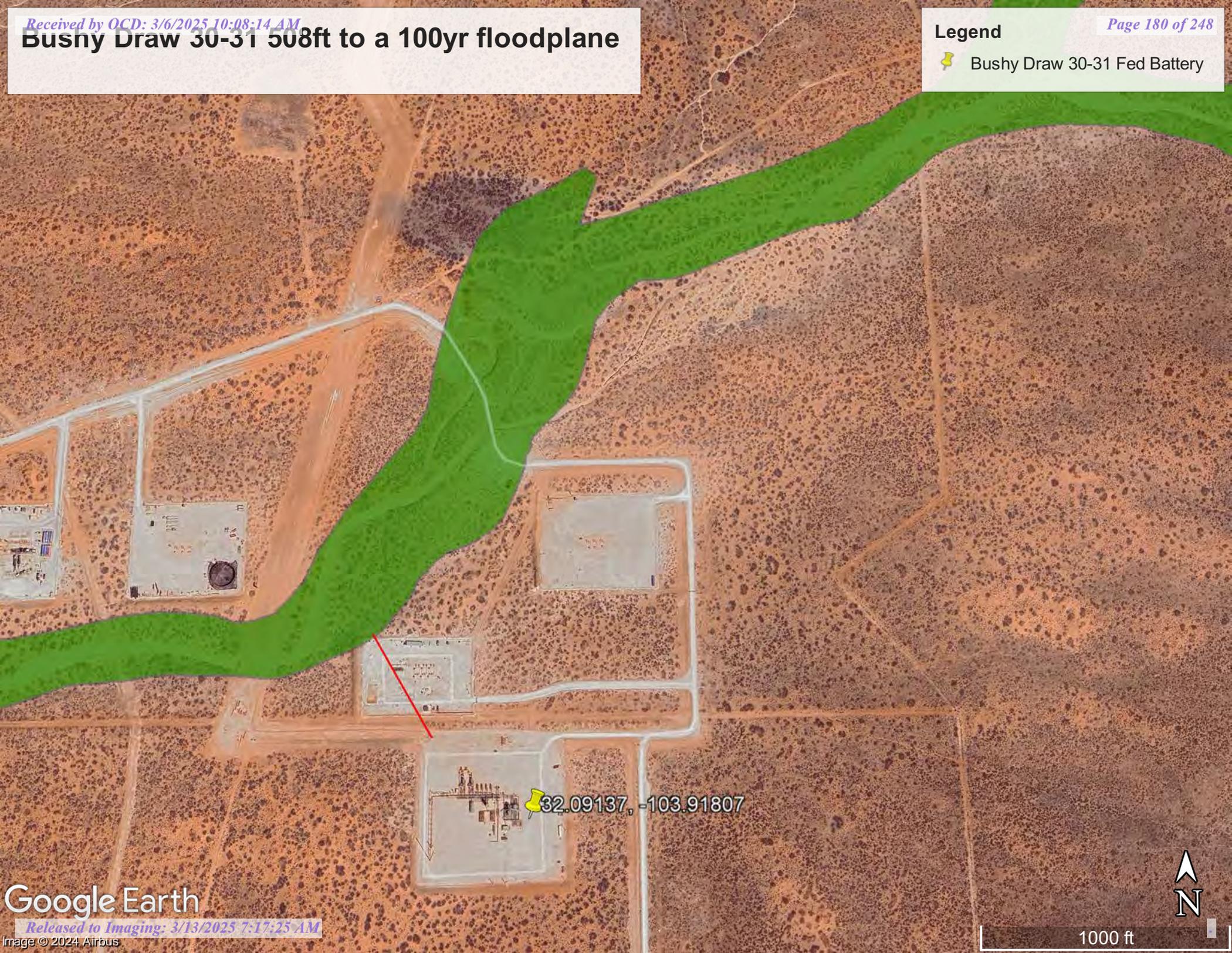
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/18/2024 at 8:49 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded 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.

# Bushy Draw 30-31 508ft to a 100yr floodplane

## Legend

-  Bushy Draw 30-31 Fed Battery



 32.09137, -103.91807



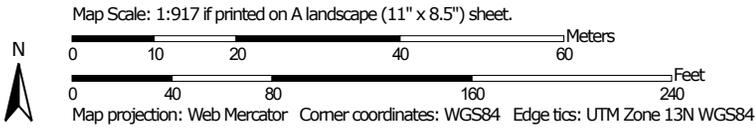


A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Eddy Area, New Mexico



### Custom Soil Resource Report Soil Map (11. Bushy Draw 30-31 Soil Type)



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: Eddy Area, New Mexico  
 Survey Area Data: Version 20, Sep 3, 2024

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

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

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

## Custom Soil Resource Report

## Map Unit Legend (11. Bushy Draw 30-31 Soil Type)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BB	Berino complex, 0 to 3 percent slopes, eroded	3.7	100.0%
<b>Totals for Area of Interest</b>		<b>3.7</b>	<b>100.0%</b>

## Map Unit Descriptions (11. Bushy Draw 30-31 Soil Type)

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

## Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

## Custom Soil Resource Report

**Eddy Area, New Mexico****BB—Berino complex, 0 to 3 percent slopes, eroded****Map Unit Setting**

*National map unit symbol:* 1w43  
*Elevation:* 2,000 to 5,700 feet  
*Mean annual precipitation:* 5 to 15 inches  
*Mean annual air temperature:* 57 to 70 degrees F  
*Frost-free period:* 180 to 260 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Berino and similar soils:* 60 percent  
*Pajarito and similar soils:* 25 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Berino****Setting**

*Landform:* Plains, fan piedmonts  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

**Typical profile**

*H1 - 0 to 17 inches:* fine sand  
*H2 - 17 to 58 inches:* sandy clay loam  
*H3 - 58 to 60 inches:* loamy sand

**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  
*Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Moderate (about 8.0 inches)

**Interpretive groups**

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

## Custom Soil Resource Report

**Description of Pajarito****Setting**

*Landform:* Dunes, plains, interdunes  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Parent material:* Mixed alluvium and/or eolian sands

**Typical profile**

*H1 - 0 to 9 inches:* loamy fine sand  
*H2 - 9 to 72 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:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*Maximum salinity:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Moderate (about 8.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* A  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

**Minor Components****Pajarito**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

**Wink**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

**Cacique**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No

**Kermit**

*Percent of map unit:* 3 percent  
*Ecological site:* R070BD005NM - Deep Sand  
*Hydric soil rating:* No

# Soil Information for All Uses

---

## Ecological Sites

Individual soil map unit components can be correlated to a particular ecological site. The Ecological Site Assessment section includes ecological site descriptions, plant growth curves, state and transition models, and selected National Plants database information.

### All Ecological Sites — (12. Bushy Draw 30-31 Ecological )

An "ecological site" is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. For example, the hydrology of the site is influenced by development of the soil and plant community. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production.

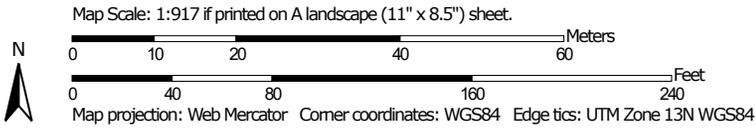
An ecological site name provides a general description of a particular ecological site. For example, "Loamy Upland" is the name of a rangeland ecological site. An "ecological site ID" is the symbol assigned to a particular ecological site.

The map identifies the dominant ecological site for each map unit, aggregated by dominant condition. Other ecological sites may occur within each map unit. Each map unit typically consists of one or more components (soils and/or miscellaneous areas). Each soil component is associated with an ecological site. Miscellaneous areas, such as rock outcrop, sand dunes, and badlands, have little or no soil material and support little or no vegetation and therefore are not linked to an ecological site. The table below the map lists all of the ecological sites for each map unit component in your area of interest.

### Custom Soil Resource Report Map—Dominant Ecological Site (12. Bushy Draw 30-31 Ecological )



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 Rating Polygons**

 R070BD003NM  
 Not rated or not available

**Soil Rating Lines**

 R070BD003NM  
 Not rated or not available

**Soil Rating Points**

 R070BD003NM  
 Not rated or not available

**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: Eddy Area, New Mexico  
 Survey Area Data: Version 20, Sep 3, 2024

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

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

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

Custom Soil Resource Report

**Table—Ecological Sites by Map Unit Component (12. Bushy Draw 30-31 Ecological )**

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
BB	Berino complex, 0 to 3 percent slopes, eroded	Berino (60%)	R070BD003NM — Loamy Sand	3.7	100.0%
		Pajarito (25%)	R070BD003NM — Loamy Sand		
		Cacique (4%)	R070BD004NM — Sandy		
		Pajarito (4%)	R070BD003NM — Loamy Sand		
		Wink (4%)	R070BD003NM — Loamy Sand		
		Kermit (3%)	R070BD005NM — Deep Sand		
<b>Totals for Area of Interest</b>				<b>3.7</b>	<b>100.0%</b>

## Ecological site R070BD003NM Loamy Sand

Accessed: 09/02/2024

### 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	<b>Sandy</b> Sandy
R070BD005NM	<b>Deep Sand</b> 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

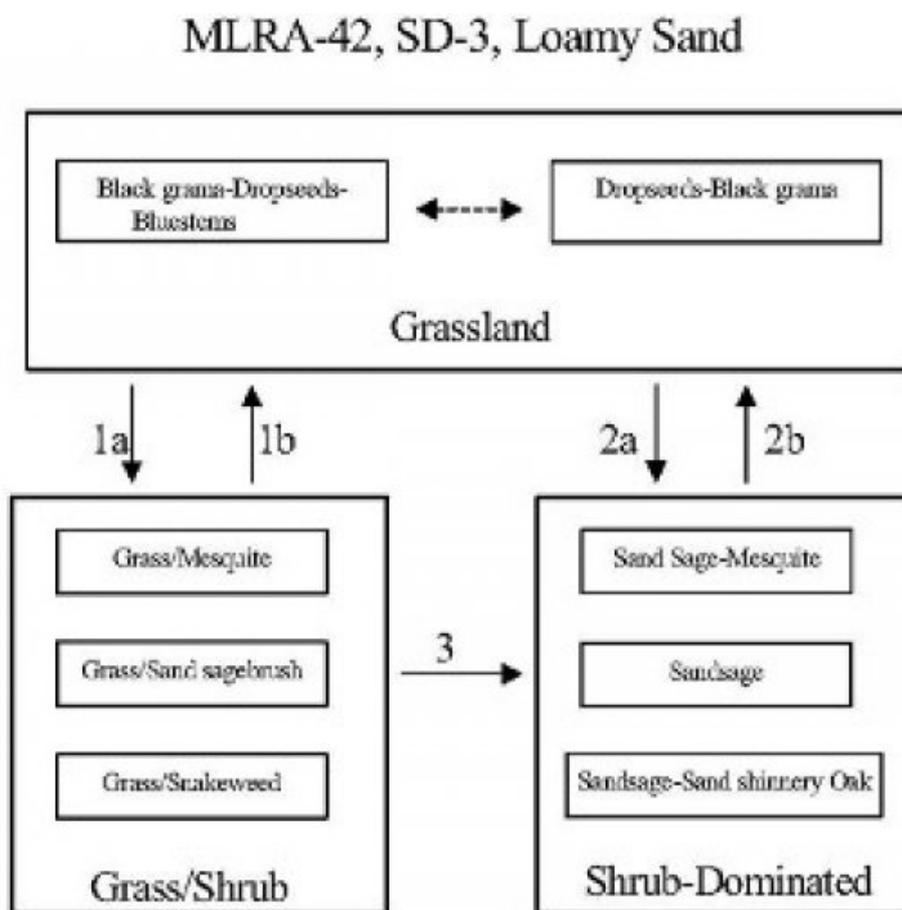
### Overview

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
<b>Total</b>	<b>650</b>	<b>1225</b>	<b>1800</b>

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

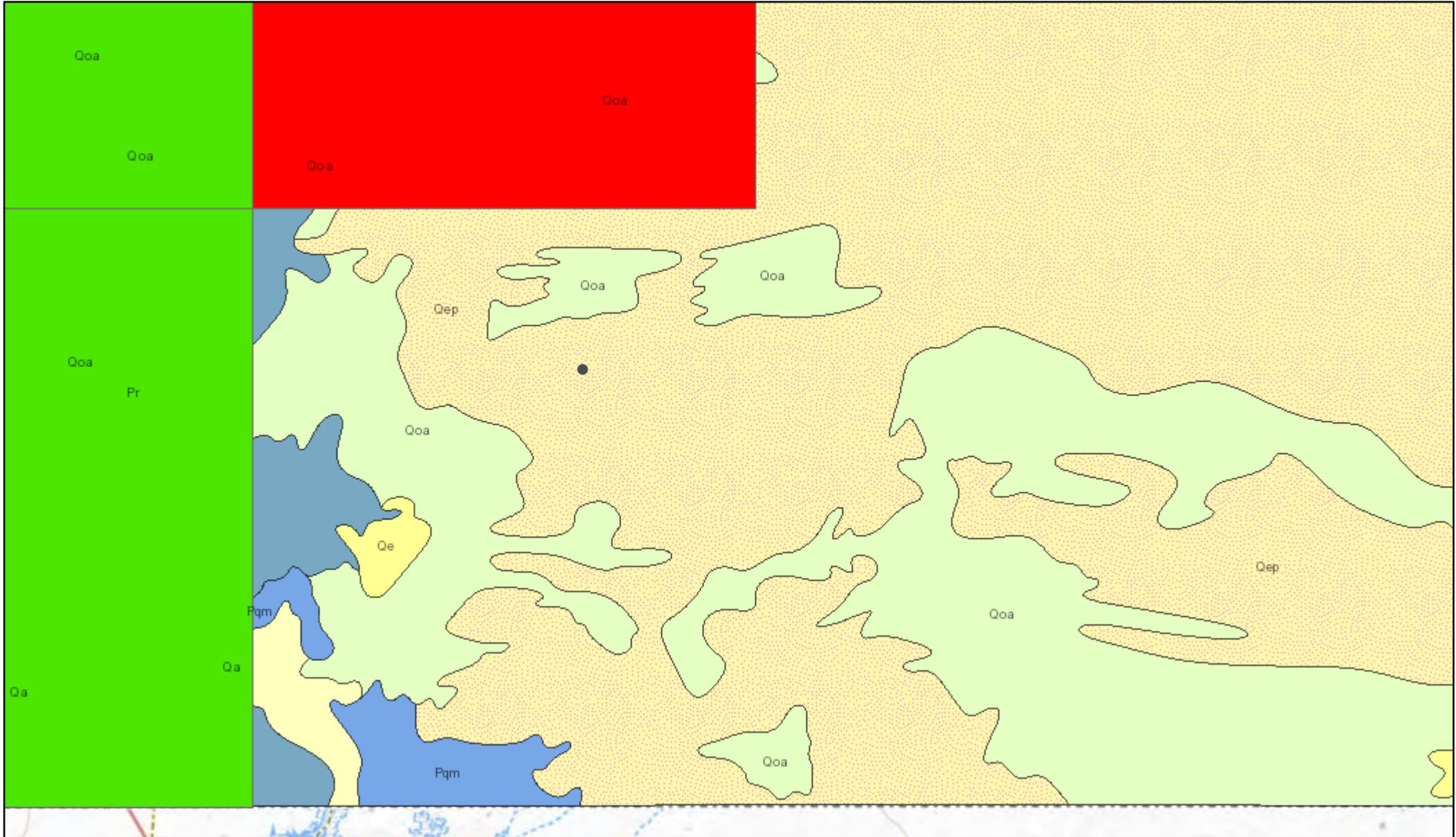
aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased 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 (%)
<b>Grass/Grasslike</b>					
1	<b>Warm Season</b>			61–123	
	little bluestem	SCSC	<i>Schizachyrium scoparium</i>	61–123	–
2	<b>Warm Season</b>			37–61	
	sand bluestem	ANHA	<i>Andropogon hallii</i>	37–61	–
3	<b>Warm Season</b>			37–61	
	cane bluestem	BOBA3	<i>Bothriochloa barbinodis</i>	37–61	–
	silver bluestem	BOSA	<i>Bothriochloa saccharoides</i>	37–61	–
4	<b>Warm Season</b>			123–184	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	123–184	–
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	123–184	–
5	<b>Warm Season</b>			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	<b>Warm Season</b>			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	<b>Warm Season</b>			61–123	
	hooded windmill grass	CHCU2	<i>Chloris cucullata</i>	61–123	–
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	61–123	–
9	<b>Other Perennial Grasses</b>			37–61	
	Grass, perennial	2GP	<i>Grass, perennial</i>	37–61	–
<b>Shrub/Vine</b>					
8	<b>Warm Season</b>			37–61	
	New Mexico feathergrass	HENE5	<i>Hesperostipa neomexicana</i>	37–61	–
	giant dropseed	SPGI	<i>Sporobolus giganteus</i>	37–61	–
10	<b>Shrub</b>			61–123	

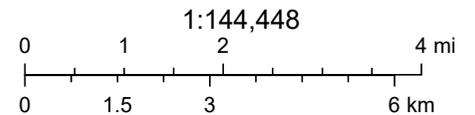
# 13. Bushy Draw 30-31 Geology



11/18/2024, 2:41:54 PM

### 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



# Daily Site Visit Report

Client:	<u>XTO Energy Inc. (US)</u>	Inspection Date:	<u>11/21/2024</u>
Site Location Name:	<u>Brushy Draw 30-31 Fed Battery</u>	Report Run Date:	<u>12/2/2024 2:33 PM</u>
Client Contact Name:	<u>Amy Ruth</u>	API #:	<u></u>
Client Contact Phone #:	<u>432-661-0571</u>		
Unique Project ID	<u></u>	Project Owner:	<u></u>
Project Reference #	<u></u>	Project Manager:	<u></u>

## Summary of Times

Arrived at Site	<u>11/21/2024 10:11 AM</u>
Departed Site	<u>11/21/2024 3:07 PM</u>

# Daily Site Visit Report



Site Sketch

Site Sketch

# Daily Site Visit Report



## Field Notes

14:55 Delineate spill area

## Next Steps & Recommendations

1 Send samples to lab for analysis



# Daily Site Visit Report

## Site Photos

Viewing Direction: East



BH24-01 @ 4'

Viewing Direction: East



BH24-02 @ 4'

Viewing Direction: South



BH24-03 @ 4'

Viewing Direction: East



BH24-04 @ 4'



# Daily Site Visit Report

**Viewing Direction: East**

Descriptive Photo - 8  
Viewing Direction: East  
Date: 01/24/25 @ 4'  
Created: 1/21/2025 3:01:07 PM  
Latitude: 33.2228, Longitude: 103.4117

BH24-05 @ 4'

**Viewing Direction: West**

Descriptive Photo - 8  
Viewing Direction: East  
Date: 01/24/25 @ 4'  
Created: 1/21/2025 3:02:08 PM  
Latitude: 33.2228, Longitude: 103.4117

BH24-06 @ 4'

**Viewing Direction: North**

Descriptive Photo - 8  
Viewing Direction: East  
Date: 01/24/25 @ 4'  
Created: 1/21/2025 3:04:07 PM  
Latitude: 33.2228, Longitude: 103.4117

BH24-07

# Daily Site Visit Report



Daily Site Visit Signature

Inspector: Riley Plogger

Signature:

  
Signature \_\_\_\_\_



# Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/16/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/17/2025 2:07 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

## Summary of Times

Arrived at Site	2/16/2025 7:01 AM
Departed Site	2/16/2025 4:38 PM

## Field Notes

- 9:29** Incident north of treating equipment. Completed Vertex and XTO JSA on arrival. Communicated to XTO and confirmed work clearance. On site to collect confirmation samples from excavation surfaces on north side of pad.
- 9:29** Swept excavation sampling areas with magnetic locator prior to sample collection.
- 9:30** Collected confirmation samples from surfaces of excavations to 1, 1.5, 2, 3, 4, and 5 feet bgs on north side of pad and into pasture. Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.
- 16:02** Collected confirmation samples WS25-08 and WS25-09 from walls of excavations to 3 and 2 feet bgs, respectively. Collected confirmation samples WS25-10, WS25-11, WS25-14, and WS25-20 from walls of excavations to 1.5 feet bgs. Collected confirmation samples WS25-12, WS25-13, and WS25-17 from walls of excavations to 1 feet bgs. Collected confirmation samples WS25-15 and WS25-16 WS25-06 from walls of excavation to 2 feet bgs. Collected confirmation samples WS25-18 and WS25-19 from walls of excavations to 4 and 5 feet bgs, respectively. Field screening results were below NMOCD strictest criteria for chloride and TPH.
- 16:04** Collected confirmation samples BS25-45 through BS25-48 from base of excavation to 2 feet bgs. Collected confirmation samples BS25-49 through BS25-55 from base of excavation to 1 feet bgs. Collected confirmation samples BS25-56, BS25-57, and BS25-58 from base of excavations to 5, 4, and 1.5 feet bgs, respectively. Field screening results were below NMOCD strictest criteria for chloride and TPH.

## Daily Site Visit Report



### Next Steps & Recommendations

- 1 Continue collecting confirmation samples from prepared excavations.
- 2 Continue excavation immediately north of treating equipment.



# Daily Site Visit Report

## Site Photos

Viewing Direction: West



DESCRIPTION: Photo 1  
Viewing Direction: West  
Date: 2/16/2025 10:08:14 AM  
Location: 30-31 CTB  
Latitude: 32.29165 Longitude: -102.91855

At pad entrance facing west.

Viewing Direction: North



DESCRIPTION: Photo 2  
Viewing Direction: North  
Date: 2/16/2025 10:08:14 AM  
Location: 30-31 CTB  
Latitude: 32.29165 Longitude: -102.91855

North edge of pad facing north. Collected WS25-14 from pasture excavation wall to 1.5 feet bgs.



# Daily Site Visit Report

**Viewing Direction: East**



Geospatial Photo - 5  
Viewing Direction: East  
Edge: North edge of pad facing east. Collected WS25-12 and WS25-13 excavation wall to 1 feet bgs.  
Created: 2/17/2025 1:57:47 PM  
Lat: 32.99226, Long: -103.01807

North edge of pad facing east. Collected WS25-12 and WS25-13 excavation wall to 1 feet bgs.

**Viewing Direction: Northwest**



Geospatial Photo - 6  
Viewing Direction: Northwest  
Edge: North side of pad facing northwest. Collected WS25-12 and WS25-13 excavation wall to 1 feet bgs.  
Created: 2/17/2025 1:58:47 PM  
Lat: 32.99227, Long: -103.01807

North side of pad facing northwest. Collected WS25-12 and WS25-13 excavation wall to 1 feet bgs.

**Viewing Direction: West**



Geospatial Photo - 7  
Viewing Direction: West  
Edge: North side of pad facing west. Collected WS25-09 and WS25-10 from excavation walls to 2 and 1.5 feet bgs.  
Created: 2/17/2025 1:59:29 PM  
Lat: 32.99226, Long: -103.01807

North side of pad facing west. Collected WS25-09 and WS25-10 from excavation walls to 2 and 1.5 feet bgs.

**Viewing Direction: Southwest**



Geospatial Photo - 8  
Viewing Direction: Southwest  
Edge: North side of pad facing southwest. Collected WS25-09 and WS25-10 from excavation walls to 2 and 1.5 feet bgs.  
Created: 2/17/2025 1:59:47 PM  
Lat: 32.99227, Long: -103.01807

North side of pad facing southwest. Collected WS25-09 and WS25-10 from excavation walls to 2 and 1.5 feet bgs.



# Daily Site Visit Report

**Viewing Direction: East**

Descriptive Photo - 7  
Viewing Direction: East  
Taken: 2/12/2025 1:22:22 PM  
Location: 33.72088, -112.22188  
Latitude: 33.72088, Longitude: -112.22188

North side of pad facing east. Collected WS25-08 and WS25-11 from excavation walls to 3 and 1.5 feet bgs.

**Viewing Direction: North**

Descriptive Photo - 8  
Viewing Direction: North  
Taken: 2/12/2025 1:24:31 PM  
Location: 33.72158, Longitude: -112.22188

North side of pad facing northeast. Collected WS25-08 and WS25-11 from excavation walls to 3 and 1.5 feet bgs.

**Viewing Direction: North**

Descriptive Photo - 9  
Viewing Direction: North  
Taken: 2/12/2025 1:27:46 PM  
Location: 33.72228, Longitude: -112.22188

North side of pad facing north. Collected BS25-45, BS25-46, and WS25-16 from excavation to 2 feet bgs.

**Viewing Direction: Northeast**

Descriptive Photo - 10  
Viewing Direction: Northeast  
Taken: 2/12/2025 1:30:46 PM  
Location: 33.72298, Longitude: -112.22188

North side of pad facing northeast. Collected BS25-45 through BS25-48, WS25-15, and WS25-16 from excavation to 2 feet bgs.



# Daily Site Visit Report

**Viewing Direction: West**



North side of pad facing west. Collected BS25-47, BS25-48, WS25-15, and WS25-16 from excavation to 2 feet bgs.

**Viewing Direction: Southwest**



North side of pad facing southwest. Collected BS25-49 through BS25-55 and WS25-17 from excavation to 1 feet bgs.

**Viewing Direction: East**



North side of pad facing east. Collected BS25-49 through BS25-55 and WS25-17 from excavation to 1 feet bgs.

**Viewing Direction: North**



North side of pad facing north. Collected BS25-56 through BS25-58 and WS25-18 through WS25-20 from excavations to 1.5, 4, and 5 feet bgs.



# Daily Site Visit Report

Viewing Direction: West



North side of pad facing west. Collected BS25-56 through BS25-58 and WS25-18 through WS25-20 from excavations to 1.5, 4, and 5 feet bgs.

Viewing Direction: South



North side of pad facing south. Collected BS25-56 through BS25-58 and WS25-18 through WS25-20 from excavations to 1.5, 4, and 5 feet bgs.

# Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Lakin Pullman

**Signature:**

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line.

Signature



# Daily Site Visit Report

Client:	<u>XTO Energy Inc. (US)</u>	Inspection Date:	<u>2/17/2025</u>
Site Location Name:	<u>Brushy Draw 30-31 Fed Battery</u>	Report Run Date:	<u>2/18/2025 2:23 AM</u>
Client Contact Name:	<u>Amy Ruth</u>	API #:	<u></u>
Client Contact Phone #:	<u>432-661-0571</u>		
Unique Project ID	<u></u>	Project Owner:	<u></u>
Project Reference #	<u></u>	Project Manager:	<u></u>

## Summary of Times

Arrived at Site	<u>2/17/2025 6:44 AM</u>
Departed Site	<u>2/17/2025 4:54 PM</u>

## Field Notes

- 8:59** Incident north of treating equipment. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. Communicated to XTO and confirmed work clearance. On site to continue excavation north of treating equipment. Also on site to continue collecting confirmation samples from completed excavation on north side of pad.
- 8:59** Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.
- 14:16** Collected confirmation samples from surfaces of excavations to 1, 1.5, 2, and 3 feet bgs on north side of pad and into pasture. Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.
- 16:06** Collected confirmation samples BS25-22 and BS25-23 from base of excavation to 3 feet bgs. Collected confirmation samples BS25-24 through 26 from base of excavation to 2 feet bgs. Collected confirmation samples BS25-27 through BS25-34 from base of excavation to 1.5 feet bgs on pad. Collected confirmation samples BS25-35 through BS25-40 from base of excavation to 1 feet bgs. Collected confirmation samples BS25-41 through BS25-44 from base of excavation to 1.5 feet bgs in pasture off north edge of pad. Field screening results were below NMOCD strictest criteria for chloride and TPH.
- 16:07** Packed confirmation samples for laboratory analyses. Confirmation sampling for excavation on north side of pad is tentatively completed to date pending laboratory results.

## Daily Site Visit Report



**16:08** Halo work crew continued to dig excavation between pipes north of treating equipment to 3 feet bgs with hand tools. Excavation was not completed and was to continue the following day.

### Next Steps & Recommendations

- 1 Continue excavation.



# Daily Site Visit Report

## Site Photos

Viewing Direction: West



Descriptive Photo:  
Viewing Direction: West  
Date: 03/05/2025 7:44:30 AM  
Location: 30-31 CTB  
Latitude: 32.09185 Longitude: -103.918555

At pad entrance facing west.

Viewing Direction: West



Descriptive Photo:  
Viewing Direction: West  
Date: 03/05/2025 7:44:30 AM  
Location: 30-31 CTB  
Latitude: 32.09185 Longitude: -103.918555

North side of pad facing west. Collected BS25-22 and BS25-23 from excavation to 3 feet bgs.

Viewing Direction: West



Descriptive Photo:  
Viewing Direction: West  
Date: 03/05/2025 7:44:30 AM  
Location: 30-31 CTB  
Latitude: 32.09185 Longitude: -103.918555

North side of pad facing west. Collected BS25-27 through BS25-30 from excavation to 1.5 feet bgs.

Viewing Direction: Southwest



Descriptive Photo:  
Viewing Direction: Southwest  
Date: 03/05/2025 7:44:30 AM  
Location: 30-31 CTB  
Latitude: 32.09185 Longitude: -103.918555

North side of pad facing southwest. Collected BS25-24 through BS25-27 from excavation to 2 feet bgs.



# Daily Site Visit Report

**Viewing Direction: Northeast**



Descriptive Photo - 5  
Viewing Direction: Northeast  
Date: North side of pad facing northeast. Collected BS25-31 through BS25-34 from excavation to 1.5 feet bgs.  
Created: 2/17/2025 1:57:03 PM  
Lat: 33.092296, Long: -103.919078

North side of pad facing northeast. Collected BS25-31 through BS25-34 from excavation to 1.5 feet bgs.

**Viewing Direction: East**



Descriptive Photo - 6  
Viewing Direction: East  
Date: North side of pad facing east. Collected BS25-31 through BS25-34 from excavation to 1.5 feet bgs.  
Created: 2/17/2025 1:57:52 PM  
Lat: 33.092296, Long: -103.919078

North side of pad facing east. Collected BS25-31 through BS25-34 from excavation to 1.5 feet bgs.

**Viewing Direction: East**



Descriptive Photo - 7  
Viewing Direction: East  
Date: North side of pad facing east. Collected BS25-35 through BS25-40 from excavation to 1 feet bgs.  
Created: 2/17/2025 1:58:51 PM  
Lat: 33.092296, Long: -103.919078

North side of pad facing east. Collected BS25-35 through BS25-40 from excavation to 1 feet bgs.

**Viewing Direction: Northwest**



Descriptive Photo - 8  
Viewing Direction: Northwest  
Date: North side of pad facing northwest. Collected BS25-35 through BS25-40 from excavation to 1 feet bgs.  
Created: 2/17/2025 1:59:40 PM  
Lat: 33.092296, Long: -103.919078

North side of pad facing northwest. Collected BS25-35 through BS25-40 from excavation to 1 feet bgs.



# Daily Site Visit Report

**Viewing Direction: Southeast**



Descriptive Photo - 9  
Viewing Direction: Southeast  
View: North edge of pad facing southeast. Collected BS25-35 through BS25-40 from excavation to 1 feet bgs.  
Created: 2/17/2025 2:03:57 PM  
Lat: 31.92288, Long: -103.91909

North edge of pad facing southeast. Collected BS25-35 through BS25-40 from excavation to 1 feet bgs.

**Viewing Direction: North**



Descriptive Photo - 10  
Viewing Direction: North  
View: North edge of pad facing north. Collected BS25-41 through BS25-44 from excavation in pasture to 1.5 feet bgs.  
Created: 2/17/2025 2:03:57 PM  
Lat: 31.92343, Long: -103.91909

North edge of pad facing north. Collected BS25-41 through BS25-44 from excavation in pasture to 1.5 feet bgs.

**Viewing Direction: Southeast**



Descriptive Photo - 11  
Viewing Direction: Southeast  
View: North of the pad facing southeast. Collected BS25-45 through BS25-48 from excavation in pasture to 1.5 feet bgs.  
Created: 2/17/2025 2:03:57 PM  
Lat: 31.92288, Long: -103.91909

North of pad facing southeast. Collected BS25-45 through BS25-48 from excavation in pasture to 1.5 feet bgs.

**Viewing Direction: North**



Descriptive Photo - 12  
Viewing Direction: North  
View: North of treating equipment facing north. Excavation to 3 feet bgs incomplete.  
Created: 2/17/2025 2:03:57 PM  
Lat: 31.92343, Long: -103.91909

North of treating equipment facing north. Excavation to 3 feet bgs incomplete.



## Daily Site Visit Report

**Viewing Direction: East**



Descriptive Photo - 13  
Viewing Direction - East  
Desc: North of treating equipment facing east. Excavation to 3 feet bgs incomplete.  
Created: 2/17/2025 4:09:37 PM  
Lat: 32.091882, Long: -103.918976

North of treating equipment facing east.  
Excavation to 3 feet bgs incomplete.

The photograph shows an industrial site with a large pile of sand in the background. In the foreground, there is an excavation pit. A large green pipe runs horizontally across the middle of the frame. To the left, there is some yellow equipment. In the center of the excavation, there is a white vertical pipe with an orange cap. The ground is reddish-brown soil.

# Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Lakin Pullman

**Signature:**

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line.

Signature



# Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/20/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/21/2025 2:38 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

## Summary of Times

Arrived at Site	2/20/2025 7:10 AM
Departed Site	2/20/2025 4:47 PM

## Field Notes

- 7:16** Incident north of treating equipment. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. Communicated to XTO and confirmed work clearance. On site to complete excavation on north side of pad. Also on site to collect confirmation samples from excavation surfaces.
- 7:18** Swept excavation and sampling areas with magnetic locator. Infrastructure proximity introduced interference.
- 13:48** Halo crew completed excavation to 2 feet bgs east of pipelines. Excavation tentatively completed pending field screening results.
- 13:51** Collected confirmation samples from surfaces of excavations to 3, 4, and 6 feet north of treating equipment. Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.
- 14:42** Collected confirmation samples BS25-01 through BS25-09 from base of excavation to 4 feet bgs. Collected confirmation samples BS25-10 through BS25-20 from base of excavation to 6 feet bgs. Collected confirmation samples BS25-59 and BS25-60 from base of excavation to 3 feet bgs between pipes. Collected confirmation sample BS25-21 and BS25-68 through BS25-70 from base of excavation to 3 feet bgs along pipelines. Field screening results were below NMOCD strictest criteria for chloride and TPH.
- 15:25** Collected confirmation samples WS25-01 through WS25-04 from walls of excavation to 4 feet bgs. Collected confirmation samples WS25-05 through WS25-07 from walls of excavation to 6 feet bgs. Collected confirmation samples WS25-21 and WS25-22 from wall of excavation to 3 feet bgs between pipes. Field screening results were below NMOCD strictest criteria for chloride and TPH.



## Daily Site Visit Report

15:26 Remaining confirmation samples to be collected the following day.

### Next Steps & Recommendations

- 1 Submit confirmation samples for laboratory analyses.
- 2 Collect remaining confirmation samples.



# Daily Site Visit Report

## Site Photos

Viewing Direction: West



Description Photo - 1  
Viewing Direction: West  
Dist: At pad entrance facing west.  
Created: 2/22/2025 7:10:59 AM  
Lat: 32.09165, Long: -103.917467

At pad entrance facing west.

Viewing Direction: North



Description Photo - 2  
Viewing Direction: North  
Dist: North of treating equipment facing north. Excavation completed east of pipelines.  
Created: 2/22/2025 2:14:24 PM  
Lat: 32.091774, Long: -103.918798

North of treating equipment facing north.  
Excavation completed east of pipelines.

Viewing Direction: South



Description Photo - 3  
Viewing Direction: South  
Dist: North of treating equipment facing south. Excavation completed east of pipelines.  
Created: 2/22/2025 11:14:53 AM  
Lat: 32.092177, Long: -103.918798

North of treating equipment facing south.  
Excavation completed east of pipelines.

Viewing Direction: North



Description Photo - 4  
Viewing Direction: North  
Dist: At treating equipment facing north. Collected confirmation samples from excavations to 4 and 6 feet bgs.  
Created: 2/20/2025 10:16:49 PM  
Lat: 32.091654, Long: -103.918837

At treating equipment facing north. Collected confirmation samples from excavations to 4 and 6 feet bgs.



# Daily Site Visit Report

**Viewing Direction: North**



Descriptive Photo:  
Viewing Direction: North  
North of treating equipment facing north. Collected confirmation samples from excavations to 4 and 6 feet bgs.  
Created: 2/20/2025 2:17:41 PM  
Lat:32.091844, Long:-103.91844

North of treating equipment facing north. Collected confirmation samples from excavations to 4 and 6 feet bgs.

**Viewing Direction: North**



Descriptive Photo:  
Viewing Direction: North  
North of treating equipment facing north. Collected confirmation samples from excavations to 4 and 6 feet bgs.  
Created: 2/20/2025 2:17:41 PM  
Lat:32.091844, Long:-103.91844

North of treating equipment facing north. Collected confirmation samples from excavations to 4 and 6 feet bgs.

**Viewing Direction: Northwest**



Descriptive Photo:  
Viewing Direction: Northwest  
North of treating equipment facing northwest. Collected confirmation samples from excavations to 4 and 6 feet bgs.  
Created: 2/20/2025 2:17:41 PM  
Lat:32.091844, Long:-103.91844

North of treating equipment facing northwest. Collected confirmation samples from excavations to 4 and 6 feet bgs.

**Viewing Direction: South**



Descriptive Photo:  
Viewing Direction: South  
North of treating equipment facing southeast. Collected confirmation samples from excavations to 4 and 6 feet bgs.  
Created: 2/20/2025 2:17:41 PM  
Lat:32.091844, Long:-103.91844

North of treating equipment facing southeast. Collected confirmation samples from excavations to 4 and 6 feet bgs.



# Daily Site Visit Report

**Viewing Direction: South**



North of treating equipment facing south. Collected confirmation samples from excavations to 4 and 6 feet bgs.

**Viewing Direction: Southwest**



North of treating equipment facing southwest. Collected confirmation samples from excavations to 4 and 6 feet bgs.

**Viewing Direction: Southwest**



North of treating equipment facing southwest. Collected confirmation samples from excavations to 3 feet bgs between pipes.

**Viewing Direction: Southeast**



North of treating equipment facing southeast. Collected confirmation samples from excavations to 3 feet bgs between pipes.



# Daily Site Visit Report

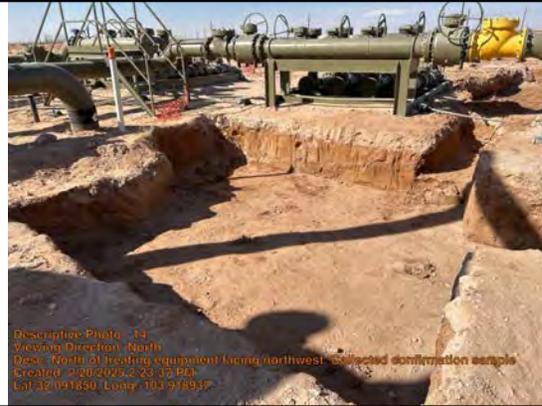
**Viewing Direction: Southeast**



Descriptive Photo - 13  
Viewing Direction: Southeast  
Desc: North of treating equipment facing southeast. Collected confirmation sample  
Created: 2/20/2025 2:22:50 PM  
Lat:32.061881,Long:-103.91888

North of treating equipment facing southeast. Collected confirmation samples from excavations to 3 feet bgs between pipes.

**Viewing Direction: North**



Descriptive Photo - 14  
Viewing Direction: North  
Desc: North of treating equipment facing northwest. Collected confirmation sample  
Created: 2/20/2025 2:23:35 PM  
Lat:32.049850,Long:-103.918937

North of treating equipment facing northwest. Collected confirmation samples from excavations to 3 feet bgs between pipes.

**Viewing Direction: North**



Descriptive Photo - 15  
Viewing Direction: North  
Desc: North of treating equipment facing north. Collected confirmation sample fr  
Created: 2/20/2025 2:25:10 PM  
Lat:32.062337,Long:-103.91888

North of treating equipment facing north. Collected confirmation samples from excavation to 3 feet bgs over pipelines.

**Viewing Direction: South**



Descriptive Photo - 16  
Viewing Direction: South  
Desc: North of treating equipment facing south. Collected confirmation sample  
Created: 2/20/2025 2:25:44 PM  
Lat:32.062178,Long:-103.91888

North of treating equipment facing south. Collected confirmation samples from excavation to 3 feet bgs over pipelines.

# Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Lakin Pullman

**Signature:**

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line.

Signature



# Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/21/2025
Site Location Name:	Brushy Draw 30-31 Fed Battery	Report Run Date:	2/22/2025 5:04 PM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

## Summary of Times

Arrived at Site	2/21/2025 7:02 AM
Departed Site	2/21/2025 4:44 PM

## Field Notes

- 10:30** Incident north of treating equipment. Completed Vertex and XTO JSA on arrival. Conducted safety meeting with Halo work crew. Communicated to XTO and confirmed work clearance. On site to complete excavation on north side of pad. Also on site to complete confirmation sampling of excavation surfaces.
- 10:30** Swept excavation areas with magnetic locator. Infrastructure proximity introduced interference.
- 10:31** Halo work crew completed the excavation to 2 feet bgs west of the pipelines with hand tools due to proximity of equipment. Excavation completed pending confirmation sampling laboratory results.
- 14:02** Collected confirmation samples from surfaces of excavations to 2 and 3 feet bgs north of treating equipment. Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.
- 4:16** Collected confirmation samples BS25-61 through BS25-67 from base of excavation to 2 feet bgs west of pipelines. Collected confirmation samples BS25-71 through BS25-75 from base of excavation to 2 feet bgs east of pipelines. Field screening results were below NMOCD strictest criteria for chloride and TPH.
- 4:22** Collected confirmation samples WS25-23 and WS25-24 from walls of excavation to 2 feet bgs west of pipelines. Collected confirmation sample WS25-27 from walls of excavation to 2 feet bgs east of pipelines. Collected confirmation samples WS25-25 and WS25-26 from walls of excavation to 3 feet bgs over pipelines. Field screening results were below NMOCD strictest criteria for chloride and TPH.



## Daily Site Visit Report

**4:26** Halo stockpiled backfill and topsoil on site as material was hauled out. Collected composite samples from backfill and topsoil stockpiles. Field screening results were below NMOCD strictest criteria for chloride and TPH.

**4:26** Excavation and confirmation sampling completed pending laboratory results.

### Next Steps & Recommendations

- 1 Submit confirmation samples to laboratory for analyses.
- 2 Submit backfill and topsoil samples to laboratory for analyses.



# Daily Site Visit Report

## Site Photos

Viewing Direction: West



At site entrance facing west.

Viewing Direction: North



North of treating equipment facing north. Completed excavation west of pipelines to 2 feet bgs.



# Daily Site Visit Report

**Viewing Direction: North**



Descriptive Photo  
Viewing Direction: North  
Desc: North of treating equipment facing north. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.  
Created: 2/21/2025 10:18 PM  
Lat:32.091957, Long:-103.518279

North of treating equipment facing north. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.

**Viewing Direction: South**



Descriptive Photo  
Viewing Direction: South  
Desc: North of treating equipment facing south. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.  
Created: 2/21/2025 2:06 PM  
Lat:32.092195, Long:-103.518279

North of treating equipment facing south. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.

**Viewing Direction: Northwest**



Descriptive Photo  
Viewing Direction: Northwest  
Desc: North of treating equipment facing northwest. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.  
Created: 2/21/2025 10:18 PM  
Lat:32.091957, Long:-103.518279

North of treating equipment facing northwest. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.

**Viewing Direction: South**



Descriptive Photo  
Viewing Direction: South  
Desc: North of treating equipment facing south. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.  
Created: 2/21/2025 2:06 PM  
Lat:32.092195, Long:-103.518279

North of treating equipment facing south. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.



# Daily Site Visit Report

**Viewing Direction: Southeast**

Desktop Photo  
Viewing Direction: Southeast  
Desc: North of treating equipment facing southeast. Collected confirmation samples  
Created: 2/21/2025 2:30:41 PM  
Lat:32.09235, Long:-103.91897

North of treating equipment facing southeast. Collected confirmation samples from excavation west of pipelines to 2 feet bgs.

**Viewing Direction: Southwest**

Desktop Photo  
Viewing Direction: Southwest  
Desc: North of treating equipment facing southwest. Collected confirmation samples  
Created: 2/21/2025 2:30:54 PM  
Lat:32.09235, Long:-103.91897

North of treating equipment facing southwest. Collected confirmation samples from walls of excavation over pipelines to 3 feet bgs.

**Viewing Direction: Southeast**

Desktop Photo  
Viewing Direction: Southeast  
Desc: North of treating equipment facing southeast. Collected confirmation samples  
Created: 2/21/2025 2:31:30 PM  
Lat:32.09235, Long:-103.91897

North of treating equipment facing southeast. Collected confirmation samples from walls of excavation over pipelines to 3 feet bgs.

**Viewing Direction: South**

Desktop Photo  
Viewing Direction: South  
Desc: North of treating equipment facing south. Collected confirmation samples  
Created: 2/21/2025 2:31:45 PM  
Lat:32.09235, Long:-103.91897

North of treating equipment facing south. Collected confirmation samples from excavation east of pipelines to 2 feet bgs.



# Daily Site Visit Report

**Viewing Direction: Southeast**

Descriptive Photo - 11  
Viewing Direction: Southeast  
Date: 2/22/2025 2:10:12 PM  
Created: 2/22/2025 2:10:12 PM  
Lat: 32.082107, Long: -103.918817

North of treating equipment facing southeast. Collected confirmation samples from excavation east of pipelines to 2 feet bgs.

**Viewing Direction: North**

Descriptive Photo - 12  
Viewing Direction: North  
Date: 2/22/2025 2:10:12 PM  
Created: 2/22/2025 2:10:12 PM  
Lat: 32.082107, Long: -103.918817

North of treating equipment facing north. Collected confirmation samples from excavation east of pipelines to 2 feet bgs.

**Viewing Direction: Northeast**

Descriptive Photo - 13  
Viewing Direction: Northeast  
Date: 2/22/2025 2:13:28 PM  
Created: 2/22/2025 2:13:28 PM  
Lat: 32.082107, Long: -103.918817

North of treating equipment facing northeast. Collected confirmation samples from excavation east of pipelines to 2 feet bgs.

**Viewing Direction: North**

Descriptive Photo - 14  
Viewing Direction: North  
Date: 2/22/2025 2:13:28 PM  
Created: 2/22/2025 2:13:28 PM  
Lat: 32.082107, Long: -103.918817

North of treating equipment facing north. Collected confirmation samples from excavation east of pipelines to 2 feet bgs.



# Daily Site Visit Report



North edge of pad facing north. Completed excavation in pasture.



North of pad facing southeast. Completed excavation in pasture.



North edge of pad facing southeast. Completed excavation.



North edge of pad facing southeast. Completed excavation.



# Daily Site Visit Report

**Viewing Direction: South**

Responsible Party: [unreadable]  
 Viewing Direction: South  
 Date: North side of pad facing south, completed excavation.  
 Location: [unreadable]  
 Excavation: [unreadable]

North edge of pad facing south. Completed excavation.

**Viewing Direction: Southwest**

Responsible Party: [unreadable]  
 Viewing Direction: Southwest  
 Date: North side of pad facing southwest, completed excavation.  
 Location: [unreadable]  
 Excavation: [unreadable]

North edge of pad facing southwest. Completed excavation.

**Viewing Direction: Northwest**

Responsible Party: [unreadable]  
 Viewing Direction: Northwest  
 Date: North side of pad facing northwest, completed excavation.  
 Location: [unreadable]  
 Excavation: [unreadable]

North side of pad facing northwest. Completed excavation.

**Viewing Direction: East**

Responsible Party: [unreadable]  
 Viewing Direction: East  
 Date: North side of pad facing east, completed excavation.  
 Location: [unreadable]  
 Excavation: [unreadable]

North side of pad facing east. Completed excavation.



# Daily Site Visit Report



North side of pad facing southwest. Completed excavation.



North side of pad facing south. Completed excavation.



North side of pad facing east. Completed excavation.



North side of pad facing southwest. Completed excavation.



# Daily Site Visit Report

**Viewing Direction: West**

Descriptive Photo: 29  
Viewing Direction: West  
Date: North side of pad facing west. Completed excavation.  
Created: 2/22/2025 4:21:23 PM  
Lat: 33.9422547, Long: -103.07921

North side of pad facing west. Completed excavation.

**Viewing Direction: East**

Descriptive Photo: 28  
Viewing Direction: East  
Date: North side of pad facing east. Completed excavation.  
Created: 2/22/2025 2:32:55 PM  
Lat: 33.9422547, Long: -103.07921

North side of pad facing east. Completed excavation.

**Viewing Direction: Southeast**

Descriptive Photo: 28  
Viewing Direction: Southeast  
Date: North side of pad facing southeast. Completed excavation.  
Created: 2/22/2025 4:22:53 PM  
Lat: 33.9422547, Long: -103.07921

North side of pad facing southeast. Completed excavation.

**Viewing Direction: Northeast**

Descriptive Photo: 30  
Viewing Direction: Northeast  
Date: North of treating equipment facing northeast. Completed excavation.  
Created: 2/22/2025 2:28:00 PM  
Lat: 33.9422547, Long: -103.07921

North of treating equipment facing northeast. Completed excavation.



# Daily Site Visit Report



North of treating equipment facing southwest. Completed excavation.



North of treating equipment facing northwest. Completed excavation.



North of treating equipment facing north. Completed excavation.



At treating equipment facing north. Completed excavation.



# Daily Site Visit Report

**Viewing Direction: West**



Descriptive Photo - 35  
Viewing Direction: West  
Date: North of tank battery facing west. Backfill stockpile.  
Created: 2/21/2025 2:33:17 PM  
Lat:32.061897, Long:-103.016910

North of tank battery facing west. Backfill stockpile.

**Viewing Direction: West**



Descriptive Photo - 36  
Viewing Direction: West  
Date: North side of pad facing west. Topsoil stockpile.  
Created: 2/21/2025 2:34:00 PM  
Lat:32.062005, Long:-103.016910

North side of pad facing west. Topsoil stockpile.

# Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Lakin Pullman

**Signature:**

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line.

Signature

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 439746

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2431846528
Incident Name	NAPP2431846528 BRUSHY DRAW 30-31 FED BATTERY @ 0
Incident Type	Release Other
Incident Status	Remediation Closure Report Received
Incident Facility	[fAPP2207332396] BRUSHY DRAW 30-31 FED BATTERY

<b>Location of Release Source</b>	
<i>Please answer all the questions in this group.</i>	
Site Name	BRUSHY DRAW 30-31 FED BATTERY
Date Release Discovered	11/10/2024
Surface Owner	Federal

<b>Incident Details</b>	
<i>Please answer all the questions in this group.</i>	
Incident Type	Release Other
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

<b>Nature and Volume of Release</b>	
<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   Other (Specify)   Crude Oil   Released: 27 BBL   Recovered: 2 BBL   Lost: 25 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion   Other (Specify)   Produced Water   Released: 108 BBL   Recovered: 2 BBL   Lost: 106 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
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)	Release was from the bulk line

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 439746

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>Yes</b>
Reasons why this would be considered a submission for a notification of a major release	<b>From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.</b>

*With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.*

**Initial Response**

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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

I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 03/06/2025
--	--

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 3

Action 439746

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	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)	Less than or equal 25 (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
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
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	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 500 and 1000 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

**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)	6800
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	4598
GRO+DRO (EPA SW-846 Method 8015M)	4101
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	01/22/2025
On what date will (or did) the final sampling or liner inspection occur	02/21/2025
On what date will (or was) the remediation complete(d)	04/15/2025
What is the estimated surface area (in square feet) that will be reclaimed	570
What is the estimated volume (in cubic yards) that will be reclaimed	85
What is the estimated surface area (in square feet) that will be remediated	10268
What is the estimated volume (in cubic yards) that will be remediated	1560

*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.*

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 4

Action 439746

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	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 <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	<a href="#">LEA LAND LANDFILL [fEEM0112342028]</a>
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	No
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

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: Robert Woodall Title: Environmental Analyst Email: <a href="mailto:robert.d.woodall@exxonmobil.com">robert.d.woodall@exxonmobil.com</a> Date: 03/06/2025
--	---

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.

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 5

Action 439746

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Deferral Requests Only</b>	
<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

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 6

Action 439746

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Sampling Event Information</b>	
Last sampling notification (C-141N) recorded	<b>433328</b>
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	<b>02/21/2025</b>
What was the (estimated) number of samples that were to be gathered	<b>51</b>
What was the sampling surface area in square feet	<b>8900</b>

<b>Remediation Closure Request</b>	
<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	12920
What was the total volume (cubic yards) remediated	1343
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	850
What was the total volume (in cubic yards) reclaimed	44
Summarize any additional remediation activities not included by answers (above)	see report

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

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

I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 03/06/2025
--	--

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 7

Action 439746

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Reclamation Report</b>	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	No

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**

CONDITIONS

Action 439746

**CONDITIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 439746
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**CONDITIONS**

Created By	Condition	Condition Date
bhall	Remediation closure approved.	3/13/2025
bhall	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	3/13/2025
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	3/13/2025
bhall	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	3/13/2025
bhall	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeded activities, inspections, and final pictures when revegetation is achieved.	3/13/2025
bhall	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	3/13/2025