Location:	**Perla Verde 31 State 003H**	
Spill Date:	**9/21/2025**	
Incident #:	nAPP2526640097	

Area 1		
Approximate Area =	786	sq. ft.
Average Saturation (or depth) of spill =	3.00	inches
Average Porosity Factor =	0.15	
Area 2		
Approximate Area =	3,134	sq. ft.
Average Saturation (or depth) of spill =	0.75	inches
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**1.25**	**bbls**
Total Produced Water =	**11.25**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.2**	**bbls**
Total Produced Water =	**1.8**	**bbls**

Incident ID: nAPP2526640097

Release Assessment and Closure

Perla Verde 31 State Com #003H

Section 31, Township 19 South, Range 35 East

API: 30-025-41862

County: Lea

Vertex File Number: 25A-05222

Prepared for:

ExxonMobil Production Company

Prepared by:

Vertex Resource Services Inc.

Date:

November 2025

Release Assessment and Closure
Perla Verde 31 State Com #003
Section 31, Township 19 South, Range 35 East
API: 30-025-41862
County: Lea

Prepared for:
ExxonMobil Production Company
3104 East Greene Street
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New Mexico Oil Conservation Division
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Riley Arnold

11/5/2025

Riley Arnold, B. Sc.
ENVIRONMENTAL FIELD TECHNICIAN, REPORTING

Date

Chad Hensley

11/6/2025

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

Date

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Appendix B. Daily Field and Sampling Reports
Appendix C. Laboratory Data Reports and Chain of Custody Forms

1.0 Introduction

ExxonMobil Production Company retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for release that occurred on September 21, 2025, at Perla Verde 31 State Com #003H, API: 30-015-43428 (hereafter referred to as the "site"). ExxonMobil submitted an initial C-141 Release Notification to New Mexico Oil Conservation Division (NMOCD) District 1 on September 23, 2025. Incident ID number nAPP2526640097 was assigned to this incident.

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

2.0 Incident Description

The release occurred on September 21, 2025, due to a packing failure at the wellhead. The incident was reported on September 23, 2025, and involved the release of approximately 12 barrels (bbl) of fluid total including 1 bbl of crude oil and 11 bbl of produced water onto the production pad. Approximately 2 bbl of free fluid was removed during the initial clean up. Additional details relevant to the release are presented in the C-141 Report. Daily Field Report (DFRs) with site photographs are included in Appendix B.

3.0 Site Characteristics

The site is located approximately 22 miles West of Hobbs, New Mexico. The legal location for the site is Section 31, Township 19 South and Range 35 East in Lea County, New Mexico. The release area is located State land. An aerial photograph and site schematic are presented on Figure 1.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2025) indicates the site's surface geology primarily comprises Qe, Eolian and Piedmont Deposits. Predominant soil texture on the site is Sandhills. Additional soil characteristics include a drainage class of excessively drained with a runoff class of very low. The karst geology potential for the site is Low (United States Department of the Interior, Bureau of Land Management, 2018).

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

The surrounding landscape is associated with dunes with elevations ranging between 3,000 to 4,400 feet. The climate is semiarid with average annual precipitation ranging between 10 and 15 inches. Using information from the United States Department of Agriculture, dunes tend to have little to no vegetation. (United States Department of Agriculture, Natural Resources Conservation Service, 2025). Shrubs such as mesquites were observed to grow near the production pad. Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

4.0 Closure Criteria Determination

The nearest active well to the site is a United States Geological Survey (USGS) monitoring well (USGS 323536103301101) located approximately 0.96 miles south of the location (United States Geological Survey, 2023). Data from 1996 shows the USGS borehole recorded a depth to groundwater of 56 feet below ground surface (bgs). Information pertaining to the depth to ground water determination is included in Appendix A.

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 a lakebed located 2.01 miles south of the site (United States Fish and Wildlife Service, 2023).

At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Table 1. Closure Criteria Determination			
Site Name: Perla Verde 31 State 3H			
Spill Coordinates: 32.610021, -103.499251		**X: UTM easting**	**Y: UTM northing**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**56**	feet
	Distance between release and nearest DTGW reference	**5,076**	feet
		0.96	miles
	Date of nearest DTGW reference measurement	**March 5, 1996**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	20,573	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	10,592	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	21,822	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**		feet
	ii) Within 1000 feet of any fresh water well or spring	128,470	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	feet
7	Within 300 feet of a wetland	23,924	feet
8	Within the area overlying a subsurface mine	No	
	Distance between release and nearest registered mine	94,837	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	60,644	feet
10	Within a 100-year Floodplain	Unknown	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	97,865	feet
11	Soil Type	Kermit soils and Dune land, Fine Sand	
12	Ecological Classification	Sandhills	
13	Geology	Qe, Eolian and Piedmont Deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

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

Table 1. Closure Criteria for Soils Impacted by a Release DTGW <50 feet bgs

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

bgs – Below ground surface
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 September 24, 2025, which identified the area of the release specified in the initial C-141 Report, estimated the approximate volume of the release and white lined the area required for the One Call request. The impacted area was determined to be approximately 3,885 square feet. The DFR associated with the site inspection is included in Appendix B.

Remediation efforts began on October 7, 2025, and were finalized on October 24, 2025. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 48 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and silver nitrate titration (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 1 to 3 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. The 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 October 8, 2025. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 48 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Cardinal Laboratory under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0).

Of the 48 samples collected, 2 samples exceeded site criteria. On October 24, 2025, Vertex personnel supervised excavation in these areas of exceedance. Samples following excavation were collected on October 27, 2025, and sent to Cardinal Laboratory. All confirmatory samples collected and analyzed were below closure criteria for the site. The Laboratory results are presented in Table 4 and laboratory data reports are included in Appendix C.

6.0 Closure Request

The release area was fully delineated, remediated, and backfilled with local soils by October 27, 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 locations “under 50 feet to groundwater”. Based on these findings ExxonMobil Production Company requests that this release be closed.

Should you have any questions or concerns, please do not hesitate to contact Chad Hensley at 575.200.6167 or chensley@vertex.ca.

7.0 References

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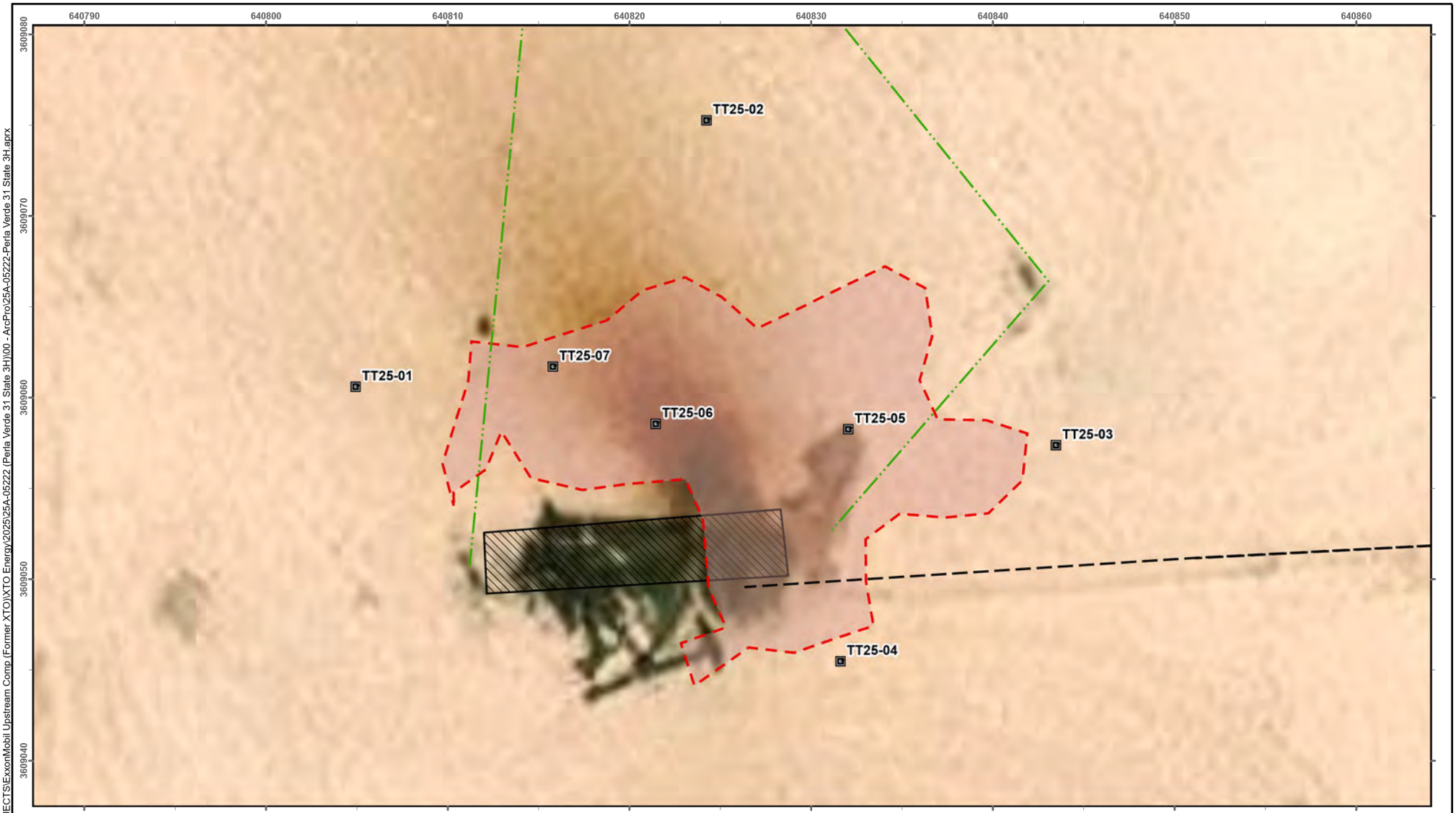
8.0 Limitations

This report has been prepared for the sole benefit of ExxonMobil Production 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 State Land Office, without the express written consent of Vertex Resource Services Inc. (Vertex) and ExxonMobil Production 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



Soil Sample
Release Extent (~3,883 sq.ft)
Electrical Line (Underground)
Production Equipment
Pipeline (Aboveground)

VERTEX

0 10 20 ft.

NAD 1983 UTM Zone 13N

Date: Oct 23/25

Map Center:
Lat: 32.610108°N,
Long:103.499126°W

N

Characterization Site Sampling Schematic
Perla Verde 31 State #3H

FIGURE:
1

ExxonMobil

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. Site features from GPS by Vertex Professional Services Ltd. (VPS), 2025.

VERSATILITY. EXPERTISE.

Document Path: S:\04 - Geomatics\1-Projects\ US PROJECTS\ExxonMobil Upstream Comp (Former XTO)\XTO Energy\2025\25A-05222 (Perla Verde 31 State 3H)\00 - ArcPro\25A-05222-Perla Verde 31 State 3H.aprx

BaseSample (Prefixed by "BS25-")
Wall Sample
Electrical Line (Underground)
Pipeline (Aboveground)
Excavation to 1' bgs (~2,058 sq.ft. | 222 ft.)
East Excavation to 2' bgs (~3,511 sq.ft. | 251 ft.)
West Excavation to 2' bgs (~529 sq.ft. | 92 ft.)
Excavation to 3' bgs (~1,011 sq.ft. | 153 ft.)
Production Equipment
Release Extent (~3,883 sq.ft)

VERTEX

0 10 20 ft.

NAD 1983 UTM Zone 13N

Date: Oct 23/25

Map Center:
Lat: 32.610108°N,
Long:103.499126°W

N

Confirmation Site Sampling Schematic
Perla Verde 31 State #3H

FIGURE: 2

ExxonMobil

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. Site features from GPS by Vertex Professional Services Ltd. (VPS), 2025.

VERSATILITY. EXPERTISE.

Document Path: S:\04 - Geomatics\1-Projects\ US PROJECTS\ExxonMobil Upstream Comp (Former XTO)\XTO Energy\2025\25A-05222 (Perla Verde 31 State 3H)\00 - ArcPro\25A-05222-Perla Verde 31 State 3H.aprx

TABLES

Client Name: ExxonMobil Production Company
Site Name: Perla Verde 31 State 3H
NMOCD Tracking #: nAPP2526640097
Project #: 25A-05222
Lab Report: H256319

Table 3. Initial Characterization Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater ≤ 50 feet bgs							
TT25-01	0	October 7, 2025	ND	ND	ND	16.3	ND	16.3	16.3	32
	1	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	ND
TT25-02	0	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	16
	1	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	528
TT25-03	0	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	32
	1	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	ND
TT25-04	0	October 7, 2025	ND	ND	ND	24.8	ND	24.8	24.8	528
	1	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	32
TT25-05	0	October 7, 2025	0.085	4.38	**306**	**61000**	**11700**	**61306**	**73006**	**12000**
	1	October 7, 2025	ND	ND	ND	89.3	13.7	89.3	**103**	**1020**
	2	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	80
TT25-06	2	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	528
	3	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	16
TT25-07	0	October 7, 2025	0.199	**54.1**	**1140**	**27700**	**5010**	**28840**	**33850**	**10300**
	1	October 7, 2025	ND	ND	ND	ND	ND	ND	ND	48

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

Client Name: ExxonMobil Production Company
Site Name: Perla Verde 31 State 3H
NMOCD Tracking #: nAPP2526640097
Project #: 25A-05222
Lab Reports: H256427, H256779, and H256780

Table 4. Confirmatory Sample Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater ≤ 50 feet bgs							
BS25-01	3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-02	3	October 10, 2025	ND	ND	ND	21.9	ND	21.9	21.9	80
BS25-03	3	October 10, 2025	ND	ND	ND	43.4	11	43.4	54.4	128
BS25-04	3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	48
BS25-05	3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-06	3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-07	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-08	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-09	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	112
BS25-10	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	96
BS25-11	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	192
BS25-12	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	144
BS25-13	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	160
BS25-14	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-15	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-16	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-17	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-18	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-19	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-20	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-21	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-22	1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-23	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	80
BS25-24	2	October 10, 2025	ND	ND	ND	22.4	ND	22.4	22.4	80
BS25-25	2	October 10, 2025	ND	ND	ND	10	ND	10	10	80
BS25-26	2	October 10, 2025	ND	ND	ND	**237**	41	**237**	**278**	80
	2.1	October 27, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-27	2	October 10, 2025	ND	ND	ND	**106**	18.5	**106**	**124.5**	64
	2.1	October 27, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-28	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-29	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
BS25-30	2	October 10, 2025	ND	ND	ND	12.2	ND	12.2	12.2	160
BS25-31	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	64
BS25-32	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	16
BS25-33	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	112
BS25-34	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	208
BS25-35	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	352

Client Name: ExxonMobil Production Company
Site Name: Perla Verde 31 State 3H
NMOCD Tracking #: nAPP2526640097
Project #: 25A-05222
Lab Reports: H256427, H256779, and H256780

Table 4. Confirmatory Sample Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater ≤ 50 feet bgs							
BS25-36	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	224
BS25-37	2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	112
BS25-38	2	October 10, 2025	ND	ND	ND	12.2	ND	12.2	12.2	80
BS25-39	2	October 10, 2025	ND	ND	ND	47.4	ND	47.4	47.4	176
WS25-01	0-3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	96
WS25-02	0-3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-03	0-3	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	144
WS25-04	0-2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	80
WS25-05	0-1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	48
WS25-06	0-1	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-07	0-2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-08	0-2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	32
WS25-09	0-2	October 10, 2025	ND	ND	ND	ND	ND	ND	ND	80
BACKFILL	N/A	October 27, 2025	ND	ND	ND	ND	ND	ND	ND	176

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

APPENDIX A – Closure Criteria Research Documentation

APPENDIX B – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:		API #:	
Inspection Date:	10/7/2025		

Summary of Times

Arrived at Site	10/7/2025 7:30 AM
Departed Site	10/7/2025 3:30 PM

Field Notes

7:21 Travel to site/ safety paperwork

7:21 Spill was mapped out

7:22 Test trenches were excavated for horizontal and vertical delineation

14:37 All samples were field screened

14:37 Test trenches were stepped back in 5’ increments until site criteria was met for horizontal delineation

14:38 Hydrovacing started clearing electrical lines in excavation area

14:38 Mechanical excavation begin on western side

14:38 Samples were jarred and labeled/ coc’s were created

Next Steps & Recommendations

1. Continue excavation
2. Continue Hydrovacing
3. Confirmation sampling
4. Haul contaminated material to disposal
5. Reporting

Run on 10/7/2025 10:43 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Site Photos

Viewing Direction: East

Spill mapped

Viewing Direction: East

TT25-01 @ 0’

Viewing Direction: South

TT25-02 @ 0’

Viewing Direction: West

TT25-03 @ 0’

Run on 10/7/2025 10:43 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Viewing Direction: North

TT25-04 @ 0’

Viewing Direction: Southeast

TT25-05 @ 0’

Viewing Direction: East

TS25-01 @ 0
Stepped out 5’

Viewing Direction: East

TS25-01 @ 0
Stepped out 10’

Run on 10/7/2025 10:43 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Viewing Direction: Southeast

Hydrovac exposing electrical lines

Viewing Direction: North

TT25-05 @ 1’
TT25-05 @ 2’
TT25-05 @ 3’
TT25-05 @ 4’

Viewing Direction: North

TT25-06 @ 1’
TT25-06 @ 2’
TT25-06 @ 3’

Viewing Direction: South

TT25-07 @ 1’
TT25-07 @ 2’
TT25-07 @ 3’

Run on 10/7/2025 10:43 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Viewing Direction: Northeast

TT25-04 @ 1’

Viewing Direction: South

TT25-02 @ 0’
Stepped out 5’

Viewing Direction: South

TT25-02 @ 0’
Stepped out 5’

Viewing Direction: South

TS25-02 @ 0’stepped out 15’

Run on 10/7/2025 10:43 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Viewing Direction: South

TS25-02 @ 1’ stepped out 15’

Viewing Direction: Southeast

Excavation beginning in 3’ excavation section

Viewing Direction: East

Contaminated material was placed on plastic liner on north eastern corner of pad

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Run on 10/7/2025 10:43 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Perla Verde 31 State 3H	API #:	
Inspection Date:	10/8/2025		

Summary of Times	
Arrived at Site	10/8/2025 7:30 AM
Departed Site	10/8/2025 3:30 PM

Run on 10/8/2025 11:17 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Field Notes

8:09 Hydrovac continued exposing electrical lines

8:09 Excavation continued on western edge

8:03 Samples were collected throughout excavation to ensure site criteria was met

Next Steps & Recommendations

1 Continue excavation/ field screening

2 Complete hydrovacing

3 Confirmation sampling

4 Haul contaminated material to disposal

5 Report/ backfill

Daily Site Visit Report

Site Photos

Viewing Direction: South

Excavation continued on western edge

Viewing Direction: East

Hydrovac continued exposing electrical lines

Viewing Direction: East

Hydrovac began working around production equipment

Viewing Direction: North

Wall sample on north wall of 3’ excavation area

Run on 10/8/2025 11:17 PM UTC

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Daily Site Visit Report

Viewing Direction: West

BS25-05 @ 3’

Viewing Direction: South

BS25-02 @ 3’

Viewing Direction: West

BS25-08 @ 2’

Viewing Direction: Northeast

BS25-09 @ 2’

Run on 10/8/2025 11:17 PM UTC

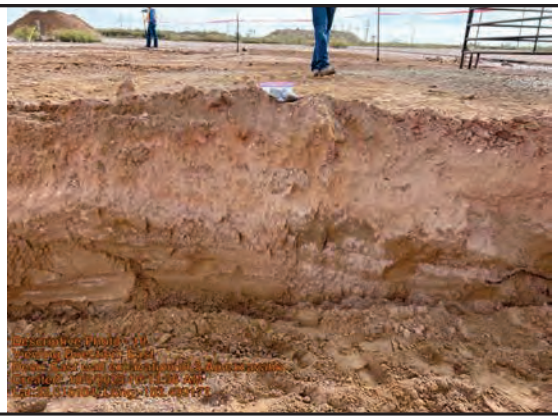
Powered by www.krinkleldar.com

Daily Site Visit Report

Viewing Direction: North

north wall sample of 2’ excavation

Viewing Direction: East



East wall excavation of 3’ excavation

Viewing Direction: North

BS25-12 @ 1’

Viewing Direction: Northeast

BS25-15 @ 1’

Run on 10/8/2025 11:17 PM UTC

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Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: Northeast
	
3’ excavation completed	Small 2’ portion of excavation completed
Viewing Direction: Northeast	**Viewing Direction**: North
	
1’ portion of excavation in progress	2’ portion of excavation in progress

Run on 10/8/2025 11:17 PM UTC

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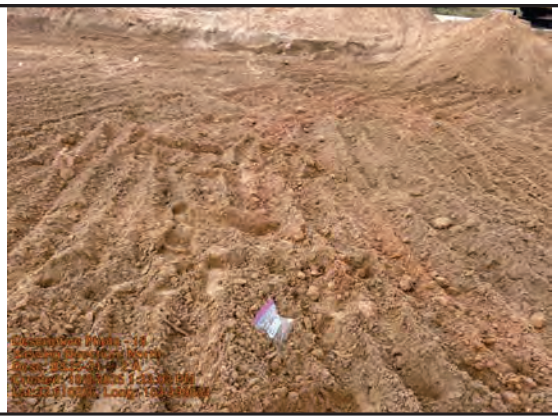
Daily Site Visit Report

Viewing Direction: Northeast

Contaminated material placed on plastic liner

Viewing Direction: North



BS25-31 @ 2’

Viewing Direction: Northwest

BS25-26 @ 2’

Run on 10/8/2025 11:17 PM UTC

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Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Run on 10/8/2025 11:17 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Perla Verde 31 State 3H	API #:	
Inspection Date:	10/10/2025		

Summary of Times	
Arrived at Site	10/10/2025 11:00 AM
Departed Site	10/10/2025 4:00 PM

Run on 10/10/2025 10:59 PM UTC

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Daily Site Visit Report

Field Notes

14:02 Crew hauled contaminated material to disposal

14:02 Confirmation sampling began

14:56 Samples were field screened

15:50 Samples were jarred / labeled/ coc's were created

Next Steps & Recommendations

1 Deliver samples to lab for further analysis

2 Report

3 Backfill

Daily Site Visit Report

Site Photos

Viewing Direction: West

Confirmation samples BS25-01 through BS25-03 @ 3’

Viewing Direction: East

Confirmation samples BS25-04 through BS25-06 @ 3’

Viewing Direction: North

Confirmation samples BS25-08 through BS25-10 @ 2’

Viewing Direction: Northeast

Confirmation samples BS25-11 through BS25-17 @ 1’

Run on 10/10/2025 10:59 PM UTC

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Daily Site Visit Report

Viewing Direction: Southeast	**Viewing Direction**: East
	
Confirmation samples BS25-18 through BS25-22 @ 1’	Confirmation samples BS25-23 through BS25-36 @ 1’
Viewing Direction: Northeast	**Viewing Direction**: Northwest
	
Confirmation samples BS25-23 through BS25-36 @ 2’	Confirmation samples BS25-37 through BS25-39 @ 2’

Run on 10/10/2025 10:59 PM UTC

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Daily Site Visit Report

Viewing Direction: South

WS25-01 @ 0-3’

Viewing Direction: Northwest

WS25-02 @ 0-3’

Viewing Direction: Northeast

WS25-03 @ 0-3’

Viewing Direction: Northwest

WS25-04 @ 0-2’

Run on 10/10/2025 10:59 PM UTC

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Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: Northeast
	
WS25-05 @ 0-1’	WS25-06 @ 0-1’
Viewing Direction: East	**Viewing Direction**: South
	
WS25-07 @ 0-2’	WS25-08 @ 0-2’

Run on 10/10/2025 10:59 PM UTC

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Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
WS25-09 @ 0-2’	Contaminated material hauled to disposal

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Run on 10/10/2025 10:59 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Perla Verde 31 State 3H	API #:	
Inspection Date:	10/24/2025		

Summary of Times	
Arrived at Site	10/24/2025 8:45 AM
Departed Site	10/24/2025 11:00 AM

Run on 10/27/2025 12:08 PM UTC

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Daily Site Visit Report

Field Notes

8:47 Travel to site/ safety paperwork

8:48 Excavation around BS25-26 and BS25-27

9:01 BS25-26 and BS25-27 were collected at 2.1'

9:02 Samples were field screened to ensure site criteria was met

Next Steps & Recommendations

1 Send samples to lab for further analysis

2 Report

3 Backfill

Daily Site Visit Report

Site Photos

Viewing Direction: West

Excavation area marked with flags

Viewing Direction: East

Excavation around BS25-26 and BS25-27 @ 2.1

Viewing Direction: Southeast

Excavation around BS25-26 and BS25-27 @ 2.1’

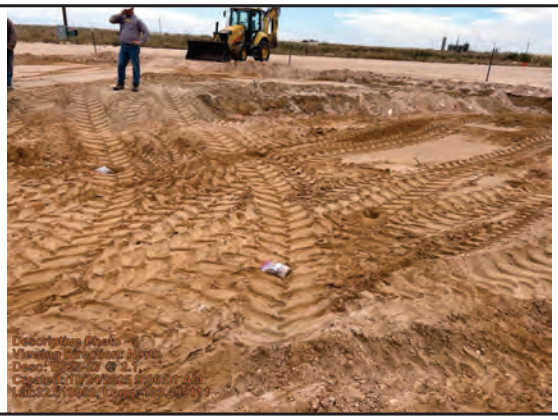
Viewing Direction: East

BS25-26 @ 2.1’

Run on 10/27/2025 12:08 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Viewing Direction: North

BS25-27 @ 2.1’

Run on 10/27/2025 12:08 PM UTC

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Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Run on 10/27/2025 12:08 PM UTC

Powered by www.krinkleldar.com

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Perla Verde 31 State 3H	API #:	
Inspection Date:	10/27/2025		

Summary of Times	
Arrived at Site	10/27/2025 8:30 AM
Departed Site	10/27/2025 10:30 AM

Run on 10/27/2025 5:57 PM UTC

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Daily Site Visit Report

Field Notes

8:23 Travel to site/ safety paperwork

8:24 Confirmation sampling BS25-26 @ 2.1’

9:08 Confirmation sampling BS25-27 @ 2.1’

9:08 Samples were field screened

9:08 Samples jarred and labeled

9:08 Coc created

9:08 Travel to and sample backfill

Next Steps & Recommendations

1 Send confirmation samples to lab for further analysis

2 Report writing

3 Backfill excavation

Daily Site Visit Report

Site Photos

Viewing Direction: East

BS25-26 and BS25-27 @ 2.1’
5 point composite samples

Viewing Direction: West

BS25-26 and BS25-27 @ 2.1’
5 point composite samples

Viewing Direction: Northwest

BACKFILL sample

Run on 10/27/2025 5:57 PM UTC

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Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Run on 10/27/2025 5:57 PM UTC

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APPENDIX C – Laboratory Data Reports and Chain of Custody Forms

CARDINAL Laboratories

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

October 15, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PERLA VERDE 31 STATE 3H

Enclosed are the results of analyses for samples received by the laboratory on 10/09/25 13:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 01 @ 0' (H256319-01)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	**16.3**	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *86.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *82.5 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 01 @ 1' (H256319-02)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *86.7 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *82.6 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 02 @ 0' (H256319-03)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *76.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *72.0 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 02 @ 1' (H256319-04)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *86.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *83.1 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 03 @ 0' (H256319-05)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *75.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *72.2 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 03 @ 1' (H256319-06)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *85.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *82.7 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 04 @ 0' (H256319-07)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	**24.8**	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *82.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *80.4 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 04 @ 1' (H256319-08)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *90.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.3 %* *39.9-141*

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CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 05 @ 0' (H256319-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.085**	0.050	10/11/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	**0.929**	0.050	10/11/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	**0.766**	0.050	10/11/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	**2.60**	0.150	10/11/2025	ND	5.91	98.6	6.00	3.87	GC-NC1
Total BTEX	**4.38**	0.300	10/11/2025	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *141 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**12000**	16.0	10/10/2025	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**306**	100	10/13/2025	ND	205	103	200	9.27	
DRO >C10-C28*	**61000**	100	10/13/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	**11700**	100	10/13/2025	ND					

Surrogate: 1-Chlorooctane *160 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *1890 %* *39.9-141*

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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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 05 @ 1' (H256319-10)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1020**	16.0	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	**89.3**	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	**13.7**	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *85.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *86.1 %* *39.9-141*

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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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 05 @ 2' (H256319-11)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *70.4-141*

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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *83.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *80.3 %* *39.9-141*

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Analytical Results For:

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

Received:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 06 @ 2' (H256319-12)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *83.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *80.9 %* *39.9-141*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 06 @ 3' (H256319-13)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *79.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *77.5 %* *39.9-141*

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CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 07 @ 0' (H256319-14)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.199**	0.100	10/11/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	**9.02**	0.100	10/11/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	**11.9**	0.100	10/11/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	**33.0**	0.300	10/11/2025	ND	5.91	98.6	6.00	3.87	GC-NC1
Total BTEX	**54.1**	0.600	10/11/2025	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *163 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10300**	16.0	10/10/2025	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1140**	50.0	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	**27700**	50.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	**5010**	50.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *166 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *798 %* *39.9-141*

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CARDINAL Laboratories

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:	10/09/2025	Sampling Date:	10/07/2025
Reported:	10/15/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: TT25 - 07 @ 1' (H256319-15)

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	10/10/2025	ND	1.89	94.6	2.00	2.87	
Toluene*	<0.050	0.050	10/10/2025	ND	1.93	96.4	2.00	3.12	
Ethylbenzene*	<0.050	0.050	10/10/2025	ND	1.92	95.9	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/10/2025	ND	5.91	98.6	6.00	3.87	
Total BTEX	<0.300	0.300	10/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *70.4-141*

Chloride, SM4500Cl-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	10/10/2025	ND	416	104	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	10/10/2025	ND	205	103	200	9.27	
DRO >C10-C28*	<10.0	10.0	10/10/2025	ND	228	114	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	10/10/2025	ND					

Surrogate: 1-Chlorooctane *84.1 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *81.4 %* *39.9-141*

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CARDINAL Laboratories

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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-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Vertex Resource
Project Manager:	Chad Hensley
Address:	3101 Boyd drive
City:	Carlsbad State: NM Zip: 88220
Phone #:	575-200-6167 Fax #:
Project #:	25A-05222 Project Owner:
Project Name:	Perla verde 31 state 3H
Project Location:	
Sampler Name:	Riley Arnold

BILL TO

P.O. #:	1149661001
Company:	ExxonMobil
Attn:	Dale Woodall
Address:	3104 E Greene St
City:	Carlsbad
State:	NM Zip: 88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME	BTEX	TPH	Chloride
H256319-1	TT25-01 @ 0'	G	1		X						X		10.7.25	8:30	X	X	X
2	TT25-01 @ 1'													8:41			
3	TT25-02 @ 0'													8:53			
4	TT25-02 @ 1'													9:10			
5	TT25-03 @ 0'													9:15			
6	TT25-03 @ 1'													9:26			
7	TT25-04 @ 0'													9:32			
8	TT25-04 @ 1'													9:42			
9	TT25-05 @ 0'													9:56			
10	TT25-05 @ 1'													10:07			

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 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 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.

04024014

Relinquished By: Date: 10-9-25 Time: 1327 Received By: Tamara Oldaker

Relinquished By: Date: Time: Received By:

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

Observed Temp. °C -0.6 Corrected Temp. °C -0.3

Sample Condition: Cool: Yes / No — Intact: Yes / No

CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address: RArnold@vertexresource.com

chensley@vertexresource.com

REMARKS:

GFLM: 48605000

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #113 #140

Correction Factor -0.5 +0.3

Bacteria (only) Cool: Yes / No — Intact: Yes / No

Sample Condition: Observed Temp. °C — Corrected Temp. °C

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource
Project Manager: Chad Hensley
Address:
City: State: Zip:
Phone #: Fax #:
Project #: 25A-05222 Project Owner:
Project Name: Perla Verde 31 State 3H
Project Location:
Sampler Name: Riley Arnold

BILL TO
P.O. #: 1149661001
Company: ExxonMobil
Attn: Dale Woodall
Address:
City:
State: Zip:
Phone #:
Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	Chloride
H256319																	
11	TT25-05 @ 2'	G	1			X				X			10.7.25	11:00	X	X	X
12	TT25-06 @ 2'													11:13			
13	TT25-06 @ 3'													11:42			
14	TT25-07 @ 0'													12:02			
15	TT25-07 @ 1'													12:27			

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 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 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.

0402401K

Relinquished By: Date: 10-9-25 Time: 1327 Received By:
Relinquished By: Date: Time: Received By:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 0.6 Corrected Temp. °C 0.3
Sample Condition: Cool: Yes / No Intact: Yes / No
CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
Rarnold@vertexresource.com
chensley@vertexresource.com
REMARKS:
GFCM:48605000

Turnaround Time: Standard ☑ Rush
Thermometer ID #113 #140
Correction Factor -0.3°C +0.3°C
Bacteria (only) Sample Condition: Cool: Yes / No Intact: Yes / No
Observed Temp. °C
Corrected Temp. °C

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

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October 20, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PERLA VERDE 31 STATE 3H

Enclosed are the results of analyses for samples received by the laboratory on 10/14/25 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 01 @ 3' (H256427-01)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.1 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	215	107	200	6.72	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	195	97.6	200	0.130	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *84.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *81.0 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 02 @ 3' (H256427-02)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.7 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	215	107	200	6.72	
DRO >C10-C28*	**21.9**	10.0	10/15/2025	ND	195	97.6	200	0.130	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *100 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *95.9 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 03 @ 3' (H256427-03)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.0 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	215	107	200	6.72	
DRO >C10-C28*	**43.4**	10.0	10/15/2025	ND	195	97.6	200	0.130	
EXT DRO >C28-C36	**11.0**	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *99.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *97.5 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 04 @ 3' (H256427-04)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	215	107	200	6.72	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	195	97.6	200	0.130	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *104 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *101 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 05 @ 3' (H256427-05)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.1 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	215	107	200	6.72	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	195	97.6	200	0.130	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *104 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *100 %* *39.9-141*

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CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 06 @ 3' (H256427-06)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *82.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *73.7 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 07 @ 2' (H256427-07)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.8 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	10/15/2025	ND	416	104	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *87.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *77.9 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 08 @ 2' (H256427-08)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.1 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *82.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *72.5 %* *39.9-141*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 09 @ 2' (H256427-09)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.3 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *88.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *81.3 %* *39.9-141*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 10 @ 2' (H256427-10)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.2 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *89.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *80.6 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 11 @ 1' (H256427-11)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.0 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *89.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *87.0 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 12 @ 1' (H256427-12)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *90.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *76.9 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 13 @ 1' (H256427-13)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *97.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *91.3 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 14 @ 1' (H256427-14)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *100 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *96.0 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 15 @ 1' (H256427-15)

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	10/15/2025	ND	2.21	111	2.00	2.92	
Toluene*	<0.050	0.050	10/15/2025	ND	2.07	103	2.00	2.28	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.03	101	2.00	4.80	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	5.98	99.6	6.00	6.32	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.3 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *102 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *95.4 %* *39.9-141*

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CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 16 @ 1' (H256427-16)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *99.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *93.4 %* *39.9-141*

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CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 17 @ 1' (H256427-17)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *93.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.7 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 18 @ 1' (H256427-18)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *104 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *97.9 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 19 @ 1' (H256427-19)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *98.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *91.9 %* *39.9-141*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 20 @ 1' (H256427-20)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *101 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *94.5 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 21 @ 1' (H256427-21)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *98.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *93.6 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 22 @ 1' (H256427-22)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *98.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *92.4 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 23 @ 2' (H256427-23)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *99.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *95.9 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 24 @ 2' (H256427-24)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	**22.4**	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *96.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *92.6 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 25 @ 2' (H256427-25)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	216	108	200	0.373	
DRO >C10-C28*	**10.0**	10.0	10/15/2025	ND	222	111	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *93.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *94.8 %* *39.9-141*

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CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 26 @ 2' (H256427-26)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	**237**	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	**41.0**	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *90.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *90.2 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 27 @ 2' (H256427-27)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	10/15/2025	ND	400	100	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	**106**	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	**18.5**	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *83.1 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *80.6 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 28 @ 2' (H256427-28)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *102 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *92.7 %* *39.9-141*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 29 @ 2' (H256427-29)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *88.1 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *84.5 %* *39.9-141*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 30 @ 2' (H256427-30)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/15/2025	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	**12.2**	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *94.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *87.3 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 31 @ 2' (H256427-31)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	QR-03
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *87.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *85.8 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 32 @ 2' (H256427-32)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *87.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *79.3 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 33 @ 2' (H256427-33)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *78.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *78.0 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 34 @ 2' (H256427-34)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *84.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *84.2 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 35 @ 2' (H256427-35)

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	10/16/2025	ND	2.19	110	2.00	0.872	
Toluene*	<0.050	0.050	10/16/2025	ND	2.21	110	2.00	0.110	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.24	112	2.00	0.274	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.65	111	6.00	0.148	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *86.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *83.1 %* *39.9-141*

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 36 @ 2' (H256427-36)

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	10/15/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/15/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.0 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *88.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.5 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 37 @ 2' (H256427-37)

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	10/15/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/15/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/15/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/15/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/15/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *89.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.6 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 38 @ 2' (H256427-38)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *70.4-141*

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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	**12.2**	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *89.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *89.9 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 39 @ 2' (H256427-39)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	**47.4**	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *93.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *98.8 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 01 @ 0-3' (H256427-40)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *70.4-141*

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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *85.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.0 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 02 @ 0-3' (H256427-41)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *89.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *90.6 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 03 @ 0-3' (H256427-42)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *90.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.6 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 04 @ 0-2' (H256427-43)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.0 %* *70.4-141*

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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *82.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *81.7 %* *39.9-141*

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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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 05 @ 0-1' (H256427-44)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.2 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *89.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *86.7 %* *39.9-141*

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CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 06 @ 0-1' (H256427-45)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	201	101	200	7.04	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	222	111	200	7.46	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *91.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *90.7 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 07 @ 0-2' (H256427-46)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.4 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *90.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *83.8 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 08 @ 0-2' (H256427-47)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *70.4-141*

Chloride, SM4500Cl-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	10/15/2025	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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *75.7 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *70.2 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/14/2025	Sampling Date:	10/10/2025
Reported:	10/20/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 09 @ 0-2' (H256427-48)

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	10/16/2025	ND	2.18	109	2.00	3.34	
Toluene*	<0.050	0.050	10/16/2025	ND	2.14	107	2.00	1.92	
Ethylbenzene*	<0.050	0.050	10/16/2025	ND	2.13	107	2.00	3.87	
Total Xylenes*	<0.150	0.150	10/16/2025	ND	6.42	107	6.00	4.65	
Total BTEX	<0.300	0.300	10/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: KH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/15/2025	ND	400	100	400	7.69	

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	10/15/2025	ND	191	95.3	200	2.99	
DRO >C10-C28*	<10.0	10.0	10/15/2025	ND	205	102	200	0.323	
EXT DRO >C28-C36	<10.0	10.0	10/15/2025	ND					

Surrogate: 1-Chlorooctane *107 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *95.8 %* *39.9-141*

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource
Project Manager: Chad Hensley
Address: 3101 Boyd drive
City: Carlsbad State: NM Zip: 88220
Phone #: 575-200-6167 Fax #:
Project #: 25A-05222 Project Owner:
Project Name: Perla verde 31 State 3H
Project Location:
Sampler Name: Riley Arnold

BILL TO

P.O. #: 1149661001
Company: ExxonMobil
Attn: Dale Woodall
Address: 304 E Greene St
City: Carlsbad
State: NM Zip: 88220
Phone #:
Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE	PRESERV.	DATE	TIME	BTEX	TPH	Chloride
H256427																
1	BS25-01 @ 3'	C	1		X						X	10.10.25	1:05	X	X	X
2	BS25-02 @ 3'												1:09			
3	BS25-03 @ 3'												1:13			
4	BS25-04 @ 3'												1:19			
5	BS25-05 @ 3'												1:24			
6	BS25-06 @ 3'												1:30			
7	BS25-07 @ 2'												1:36			
8	BS25-08 @ 2'												1:40			
9	BS25-09 @ 2'												1:43			
10	BS25-10 @ 2'												1:46			

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Relinquished By: Date: 10-14-25 Time: 1340 Received By:

Relinquished By: Date: Time: Received By:

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

Observed Temp. °C: 29 Corrected Temp. °C: 32

Sample Condition: Cool / Intact — Yes / No

CHECKED BY: (Initials)

Verbal Result: Yes No Add'l Phone #:

All Results are emailed. Please provide Email address: Rarnold@vertexresource.com
Chensley@vertexresource.com

REMARKS: GFCM: 48605000

Turnaround Time: Standard / Rush

Bacteria only: Sample Condition — Cool / Intact — Yes / No

Observed Temp. °C:

Thermometer ID: #140 Correction Factor: +0.3c Corrected Temp. °C:

10/14/25

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Vertex Resource
Project Manager:	Chad Hensley
Address:	3101 Boyd drive
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	575-200-6167
Fax #:	
Project #:	25A-05222
Project Owner:	
Project Name:	Perla verde 31 State 3H
Project Location:	
Sampler Name:	Riley Arnold

BILL TO

P.O. #:	1149661001
Company:	ExxonMobil
Attn:	Dale Woodall
Address:	364 E Greene St
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	
Fax #:	

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	Chloride
H256427																	
11	BS25-11 @ 1'	C	1			X					X		10.10.25	1:50	X	X	X
12	BS25-12 @ 1'													1:54			
13	BS25-13 @ 1'													1:58			
14	BS25-14 @ 1'													2:03			
15	BS25-15 @ 1'													2:07			
16	BS25-16 @ 1'													2:12			
17	BS25-17 @ 1'													2:18			
18	BS25-18 @ 1'													2:24			
19	BS25-19 @ 1'													2:26			
20	BS25-20 @ 1'													2:29			

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 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 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: Date: 10-14-25 Time: 1340 Received By: Tamara Oldaker

Relinquished By: Date: Time: Received By:

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

Observed Temp. °C 2.9 Corrected Temp. °C 3.2

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address: Rarnold@vertexresource.com
chensley@vertexresource.com

REMARKS:

GFCM: 418605000

Turnaround Time: Standard ☑ Rush ☐

Bacteria (only) Sample Condition: Cool: Yes / No; Intact: Yes / No

Thermometer ID #: #140 Correction Factor: -0.3°C

Observed Temp. °C

Corrected Temp. °C

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name	Vertex Resource	P.O. #	1149661001
Project Manager	Chad Hensley	Company	ExxonMobil
Address	3101 Boyd drive	Attn	Dale Woodall
City	Carlsbad State NM Zip 88220	Address	3104 E Greene St
Phone #	575-200-6167 Fax #	City	Carlsbad
Project #	25A-05222 Project Owner	State	NM Zip 88220
Project Name	Perla verde 31 State 3H	Phone #	
Project Location		Fax #	
Sampler Name	Riley Arnold		

ANALYSIS REQUEST: BTEX, TPH, Chloride

Lab I.D. H256427

Lab I.D.	Sample I.D.	(G)rab or (C)omp.	# Containers	Matrix: Soil	Preserv.: Ice/Cool	Date	Time	BTEX	TPH	Chloride
21	BS25-21 @ 1'	C	1	X	X	10.10.25	2:31	X	X	X
22	BS25-22 @ 1'	C	1	X	X	10.10.25	2:34	X	X	X
23	BS25-23 @ 2'	C	1	X	X	10.10.25	2:37	X	X	X
24	BS25-24 @ 2'	C	1	X	X	10.10.25	2:40	X	X	X
25	BS25-25 @ 2'	C	1	X	X	10.10.25	2:43	X	X	X
26	BS25-26 @ 2'	C	1	X	X	10.10.25	2:46	X	X	X
27	BS25-27 @ 2'	C	1	X	X	10.10.25	2:48	X	X	X
28	BS25-28 @ 2'	C	1	X	X	10.10.25	2:52	X	X	X
29	BS25-29 @ 2'	C	1	X	X	10.10.25	2:55	X	X	X
30	BS25-30 @ 2'	C	1	X	X	10.10.25	2:59	X	X	X

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 analyses. [illegible]

Relinquished By: [signature] Date: 10-14-25 Time: 1340 Received By: [signature]

Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
Chensley@vertexresource.com Rarnold@vertexresource.com

REMARKS: GFCM: 48605000

Delivered By: (Circle One) Observed Temp. °C 2.9
Sampler - UPS - Bus - Other: Corrected Temp. °C 3.2
Sample Condition: Cool / Intact ☑ Yes ☑ Yes ☐ No ☐ No
CHECKED BY: (Initials) [initials]

Turnaround Time: Standard / Rush
Thermometer ID #140 Correction Factor +0.3c

Bacteria (only) Sample Condition: Cool / Intact ☐ Yes ☐ Yes ☐ No ☐ No Observed Temp. °C Corrected Temp. °C

[initials] 10/14/25

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource
Project Manager: Chad Hensley
Address: 3101 Boyd drive
City: Carlsbad State: NM Zip: 88220
Phone #: 575-200-6167 Fax #:
Project #: 25A-05222 Project Owner:
Project Name: Perla verde 31 State 3H
Project Location:
Sampler Name: Riley Arnold

BILL TO
P.O. #: 1149661001
Company: ExxonMobil
Attn: Dale Woodall
Address: 304 E Greene St
City: Carlsbad
State: NM Zip: 88220
Phone #:
Fax #:

ANALYSIS REQUEST: BTEX, TPH, Chloride

Lab I.D.	Sample I.D.	# CONTAINERS	MATRIX: GROUNDWATER / WASTEWATER / SOIL / OIL / SLUDGE / OTHER : ACID/BASE	PRESERV: ICE / NONE	SAMPLING: DATE	SAMPLING: TIME	BTEX	TPH	Chloride
H256427									
31	BS25-31 @ 2'	C 1	X	X	10.10.25	3:07	X	X	X
32	BS25-32 @ 2'					3:10			
33	BS25-33 @ 2'					3:13			
34	BS25-34 @ 2'					3:16			
35	BS25-35 @ 2'					3:20			
36	BS25-36 @ 2'					3:24			
37	BS25-37 @ 2'					3:30			
38	BS25-38 @ 2'					3:34			
39	BS25-39 @ 2'					3:37			
40	WS25-01 @ 0-3'					3:41			

Relinquished By: Riley Arnold Date: 10-14-25 Time: 1340 Received By: Tamara Oldaker
Relinquished By: Date: Time: Received By:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: Observed Temp. °C: 2.9 Corrected Temp. °C: 3.2 Sample Condition: Cool / Intact: Yes / Yes CHECKED BY:

Verbal Result: Yes No Add'l Phone #:
All Results are emailed. Please provide Email address: Rarnold@vertexresource.com
Chensley@vertexresource.com
REMARKS:
GFLM: 4860 5090
Turnaround Time: Standard / Rush
Thermometer ID #140 Correction Factor: +0.3
Bacteria only: Cool / Intact: Yes / Yes
Observed Temp. °C
Corrected Temp. °C
SO 10/14/25

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource	**BILL TO**
Project Manager: Chad Hensley	P.O. # 1149661001
Address: 3101 Boyd drive	Company: ExxonMobil
City: Carlsbad State: NM Zip: 88220	Attn: Dale Woodall
Phone #: 575-200-6167 Fax #:	Address: 304 E Greene St
Project #: 25A-05222 Project Owner:	City: Carlsbad
Project Name: Perla verde 31 State 3H	State: NM Zip: 88220
Project Location:	Phone #:
Sampler Name: Riley Arnold	Fax #:

Lab I.D.	Sample I.D.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE	ICE	PRESERV.	SAMPLING DATE	SAMPLING TIME	ANALYSIS REQUEST: BTEX	TPH	Chloride
H252427																
41	WS25-02 @ 0-3'	C	1		X						X	10.10.25	3:44	X	X	X
42	WS25-03 @ 0-3'												3:47			
43	WS25-04 @ 0-2'												3:50			
44	WS25-05 @ 0-1'												3:54			
45	WS25-06 @ 0-1'												3:59			
46	WS25-07 @ 0-2'												4:07			
47	WS25-08 @ 0-2'												4:12			
48	WS25-09 @ 0-2'												4:15			

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Relinquished By:	Date: 10-14-25	Received By:	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Time: 1340	Received By:	All Results are emailed. Please provide Email address: Chensley@vertexresource.com Rarnold@vertexresource.com	
Delivered By: (Circle One)	Observed Temp. °C: 2.9	Sample Condition: Cool / Intact	REMARKS: GFCM: 48605000	
Sampler - UPS - Bus - Other:	Corrected Temp. °C: 3.2	Yes / Yes	Turnaround Time: Standard / Rush	Bacteria (only) Sample Condition: Cool / Intact
		CHECKED BY: (Initials)	Thermometer ID: #140	Observed Temp. °C
			Correction Factor: +0.3	Yes / Yes
			Date: 10/14/25	No / No
				Corrected Temp. °C

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

CARDINAL Laboratories

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

November 03, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PERLA VERDE 31 STATE 3H

Enclosed are the results of analyses for samples received by the laboratory on 10/28/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/28/2025	Sampling Date:	10/27/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 26 @ 2.1' (H256780-01)

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	10/29/2025	ND	1.87	93.6	2.00	8.74	
Toluene*	<0.050	0.050	10/29/2025	ND	1.81	90.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/29/2025	ND	1.92	96.2	2.00	9.48	
Total Xylenes*	<0.150	0.150	10/29/2025	ND	5.95	99.1	6.00	10.0	
Total BTEX	<0.300	0.300	10/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *70.4-141*

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	10/29/2025	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	10/29/2025	ND	171	85.3	200	7.13	
DRO >C10-C28*	<10.0	10.0	10/29/2025	ND	180	90.1	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	10/29/2025	ND					

Surrogate: 1-Chlorooctane *82.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *86.0 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/28/2025	Sampling Date:	10/27/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 27 @ 2.1' (H256780-02)

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	10/29/2025	ND	1.87	93.6	2.00	8.74	
Toluene*	<0.050	0.050	10/29/2025	ND	1.81	90.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/29/2025	ND	1.92	96.2	2.00	9.48	
Total Xylenes*	<0.150	0.150	10/29/2025	ND	5.95	99.1	6.00	10.0	
Total BTEX	<0.300	0.300	10/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *70.4-141*

Chloride, SM4500Cl-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	10/29/2025	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	10/29/2025	ND	171	85.3	200	7.13	
DRO >C10-C28*	<10.0	10.0	10/29/2025	ND	180	90.1	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	10/29/2025	ND					

Surrogate: 1-Chlorooctane *85.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *87.4 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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.
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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Vertex Resource	**BILL TO**
Project Manager: Chad Hensley	P.O. #: 1149661001
Address: 3101 Boyd drive	Company: ExxonMobil
City: Carlsbad State: NM Zip: 88220	Attn: Dale Woodall
Phone #: 575-200-6167 Fax #:	Address: 3104 E Greene St
Project #: 25A-05222 Project Owner:	City: Carlsbad
Project Name: Perla verde 31 State 3H	State: NM Zip: 88220
Project Location:	Phone #:
Sampler Name: Riley Arnold	Fax #:

Lab I.D.	Sample I.D.	# CONTAINERS	VOLUME / CONTAINER	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE	NONE	SAMPLED: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	Chloride
H256780																	
1	BS25-26 @ 2.1'	C	1		X						X		10.27.25	9:00	X	X	X
2	BS25-27 @ 2.1'	C	1		X						X		10.27.25	9:05	X	X	X

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0402401K - all

Relinquished By: Riley Arnold	Date: 10-28-25 Time: 1400	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: RArnold@vertexresource.com Chensley@vertexresource.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other	Observed Temp. °C: 2.4 Corrected Temp. °C: 2.7	Sample Condition: Cool Intact ☐ Yes ☐ No	CHECKED BY: (Initials) T.O.

REMARKS: GFCM: 48605000

Turnaround Time: Standard ☐ Rush ☐ Bacteria (only) Sample Condition: Cool ☐ Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

Thermometer ID #: #140 Correction Factor: +0.3°

10/28/25

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

CARDINAL Laboratories

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

November 03, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PERLA VERDE 31 STATE 3H

Enclosed are the results of analyses for samples received by the laboratory on 10/28/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	10/28/2025	Sampling Date:	10/27/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	PERLA VERDE 31 STATE 3H	Sampling Condition:	Cool & Intact
Project Number:	25A-05222	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BACKFILL (H256779-01)

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	10/29/2025	ND	1.87	93.6	2.00	8.74	
Toluene*	<0.050	0.050	10/29/2025	ND	1.81	90.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/29/2025	ND	1.92	96.2	2.00	9.48	
Total Xylenes*	<0.150	0.150	10/29/2025	ND	5.95	99.1	6.00	10.0	
Total BTEX	<0.300	0.300	10/29/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *70.4-141*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	10/29/2025	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	10/29/2025	ND	171	85.3	200	7.13	
DRO >C10-C28*	<10.0	10.0	10/29/2025	ND	180	90.1	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	10/29/2025	ND					

Surrogate: 1-Chlorooctane *81.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *79.4 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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.
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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Vertex Resource	P.O. #:	1149661001
Project Manager:	Chad Hensley	Company:	ExxonMobil
Address:	3101 Boyd drive	Attn:	Dale Woodall
City:	Carlsbad State: NM Zip: 88220	Address:	3104 E Greene St
Phone #:	575-200-6167 Fax #:	City:	Carlsbad
Project #:	25A-05222 Project Owner:	State:	NM Zip: 88220
Project Name:	Perla verde 31 State 3H	Phone #:	
Project Location:		Fax #:	
Sampler Name:	Riley Arnold		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER	DATE	TIME	BTEX	TPH	Chloride
H256779 1	Backfill	C	1			X					X		10.27.25	10:05	X	X	X

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 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 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.

040240145-all

Relinquished By:	Date: 10-28-25 Time: 1400	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
			All Results are emailed. Please provide Email address: Rarnold@vertexresource.com chensley@vertexresource.com
Relinquished By:	Date: Time:	Received By:	REMARKS: GFCM: 48605090

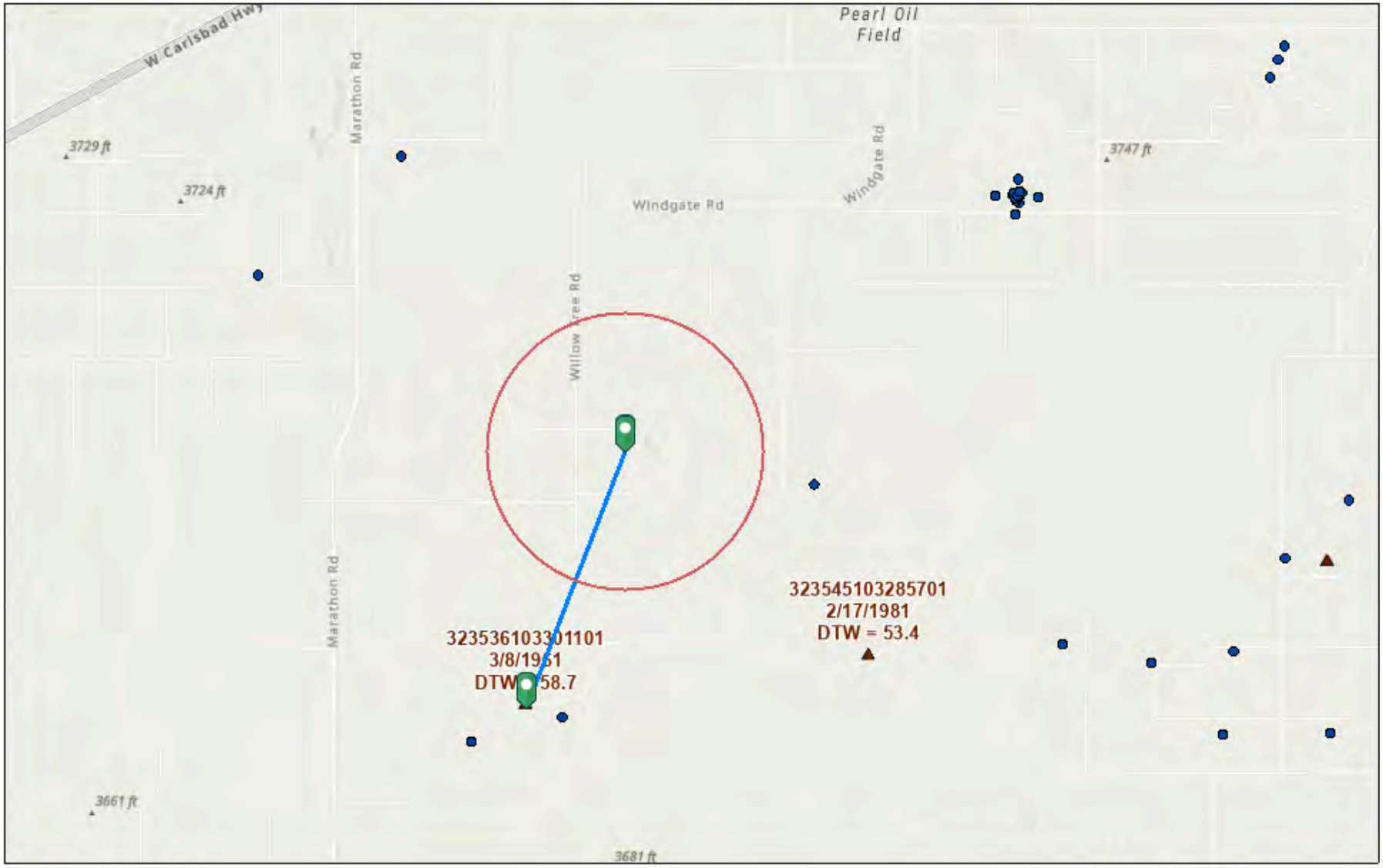
Delivered By: (Circle One)	Observed Temp. °C 2.4	Sample Condition Cool ☑ Yes Intact ☑ Yes	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐ Bacteria (only) Sample Condition Cool ☐ Yes Intact ☐ Yes Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 2.7	☐ No ☐ No		Thermometer ID #113 #140 Correction Factor -0.3°C +0.3° Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

Closure Criteria Determination			
Site Name: Perla Verde 31 State 3H			
Spill Coordinates: 32.610021, -103.499251		**X: UTM easting**	**Y: UTM northing**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**56**	feet
	Distance between release and nearest DTGW reference	**5,076**	feet
		0.96	miles
	Date of nearest DTGW reference measurement	**March 5, 1996**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	20,573	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	10,592	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	21,822	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**		feet
	ii) Within 1000 feet of any fresh water well or spring	128,470	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	feet
7	Within 300 feet of a wetland	23,924	feet
8	Within the area overlying a subsurface mine	No	
	Distance between release and nearest registered mine	94,837	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	60,644	feet
10	Within a 100-year Floodplain	Unknown	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	97,865	feet
11	Soil Type	Kermit soils and Dune land, Fine Sand	
12	Ecological Classification	Sandhills	
13	Geology	Qe, Eolian and Piedmont Deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

01. DTGW Well 0.96mi from Perla Verde 31 State 3h



10/8/2025, 10:44:06 AM

Override 1

OSE Water PODs

USGS Historical GW Wells

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click forNews Bulletins

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 323536103301101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 323536103301101 20S.35E.06.331332

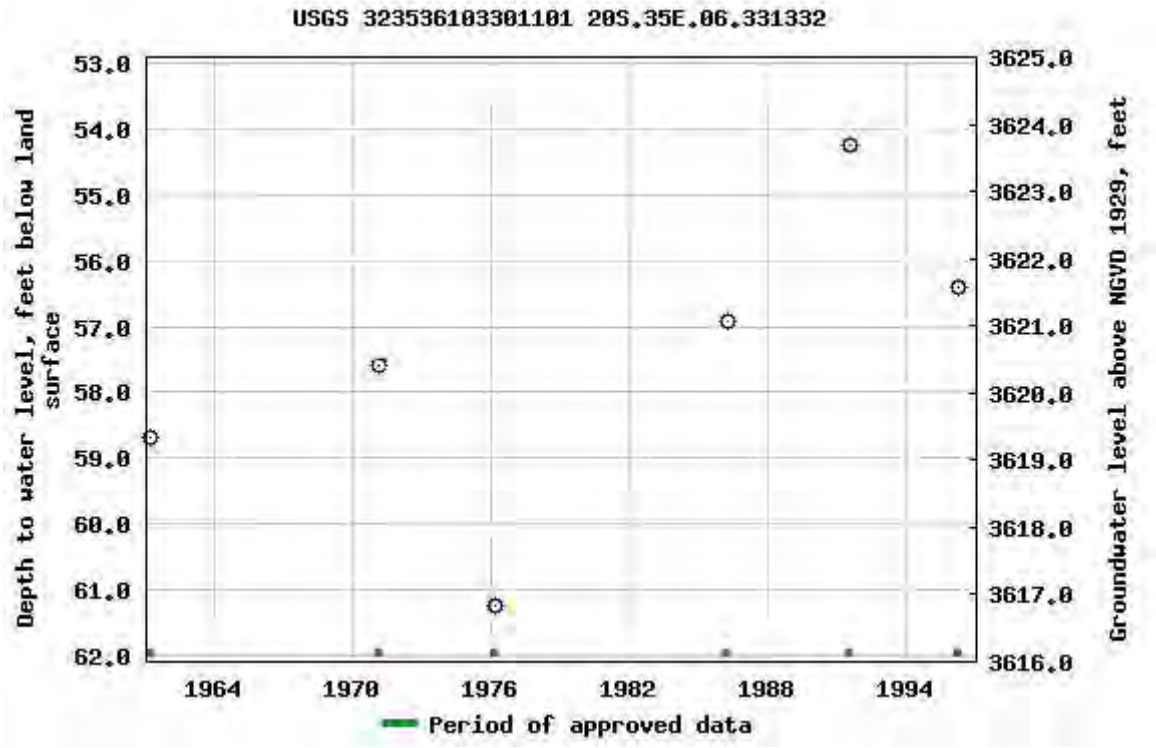
Available data for this site | Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°35'50", Longitude 103°30'17" NAD27
Land-surface elevation 3,678.00 feet above NGVD29
The depth of the well is 70 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data

Tab-separated data
Graph of data
Reselect period

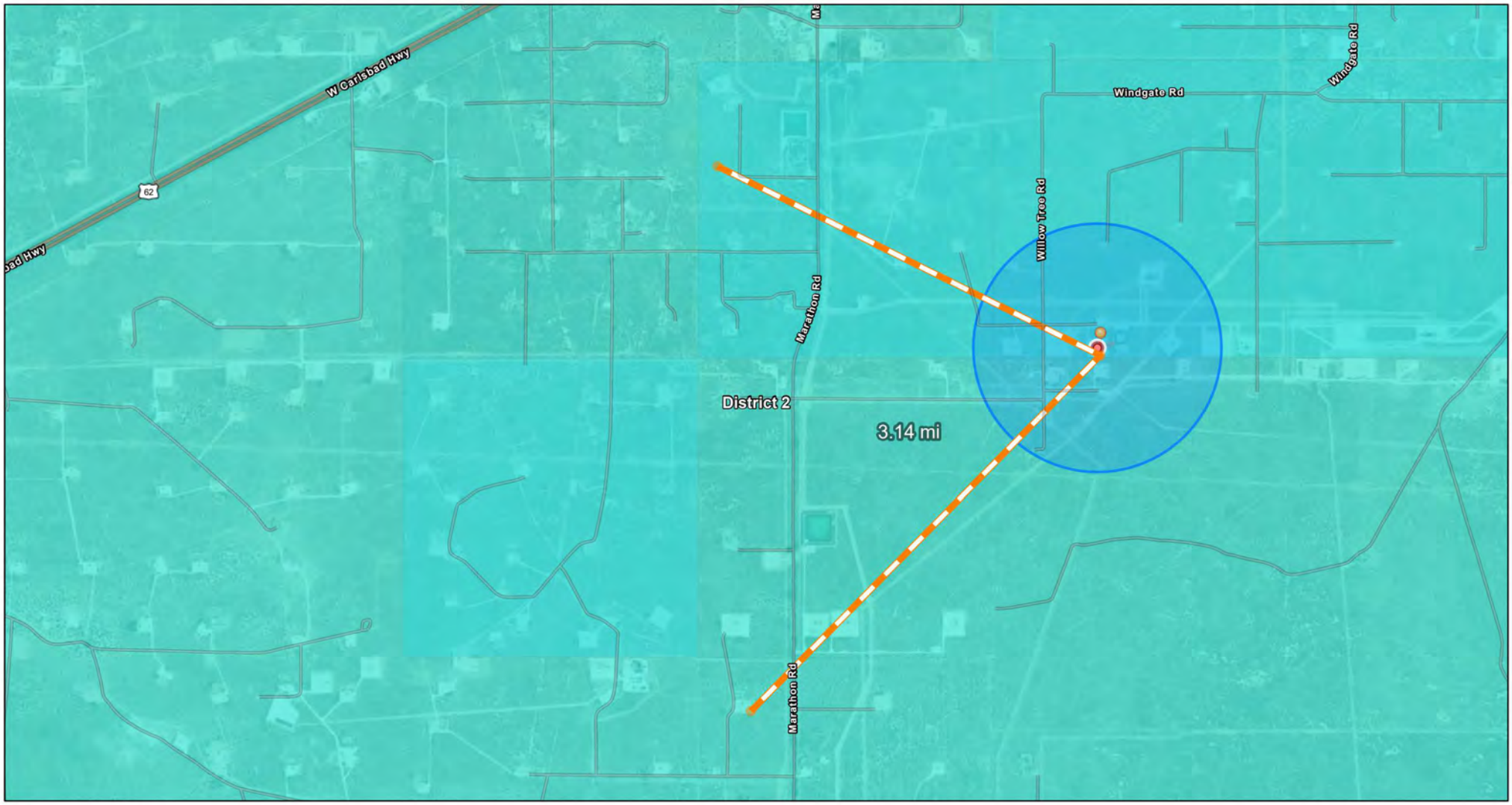


Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions or Comments
Help
Data Tips
Explanation of terms
Subscribe for system changes

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2025-11-05 09:23:58 EST
0.73 0.62 nadww02

0.5 Mi Radius OSE POD Locations Map CP 1672 & CP-2083



11/4/2025, 6:01:22 PM

1:24,366

Water Right Regulations
- Closure Area
- Artesian Plan Area
- OSE District Boundary

New Mexico State Trust Lands
- Both Estates

World Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations
- 4.8m Resolution Metadata
- Low Resolution 15m Imagery

0 0.25 0.5 1 mi
0 0.4 0.8 1.6 km

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

2017 SEP -6 PM 4:05

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD 1 (Site BL-2)	N/A	CP-1672

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Trainer Partners LTD c/o Atkins Engineering Assoc	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
2904 W. 2nd Street	Roswell	NM	88201

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	37	7.8	N
	LONGITUDE	103	31	16.2	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
8/29/2017	8/29/2017	N/A	100.80	Dry

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): Dry

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY: Switched to Air Rotary at 44 ft bgs

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger (HSA) and Air Rotary

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
-	-	± 6.00	N/A	N/A	N/A	N/A	-

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	10	±6.00	Baroid Hole Plug/Bentonite Chips	±2.1	from surface
10	44	±6.00	Native Fill	±6.7	from surface
44	100.80	±3.125	Native Fill	±3.6	from surface

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1672	POD NO. 1	TRN NO. 610609	
LOCATION 19S.34E.36.131		WELL TAG ID NO. —	PAGE 1 OF 2

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	9		Sand, medium to coarse grain sand, fine roots, brown, dry	Y ✓N	
9	19		Sandy loam, fine grain sand, light brown, dry	Y ✓N	
19	20		Sand, very fine to fine grain sand, caliche streaks, brown, dry	Y ✓N	
20	20.5		Caliche, tan, dry	Y ✓N	
20.5	24		Sand, very fine to fine grain sand, caliche streaks, brown, dry	Y ✓N	
24	29		Sandy loam, fine to medium grain sand, light brown, dry	Y ✓N	
29	34		Sandy clay, fine grain sand, caliche streaks, brown, hard, dry	Y ✓N	
34	44		Lean clay, brown, some black mottling, dry	Y ✓N	
44	48		Clay, brown to red, hard, dry	Y ✓N	
48	68		Sandy clay, coarse grain sand, 5-10mm rounded gravel, brown to red, hard, dry	Y ✓N	
68	100.80		Clay, red to brown, hard, dry/*@ 88-93 ft bgs: some caliche streaks	Y ✓N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

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: Dry. Borehole was not converted to a monitoring well.
See attached Plugging Record for details.

OSE DII ROSWELL NEW MEXICO 2017 SEP -6 PM 4:03

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Guadalupe Leyba

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] Jackie D. Atkins 09/06/2017

SIGNATURE OF DRILLER / PRINT SIGNEE NAME DATE

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1672	POD NO. 1	TRN NO. 610609
LOCATION 19S.34E.36.131	WELL TAG ID NO. —	PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.): Pod 1	WELL TAG ID NO.	OSE FILE NO(S.): CP-2083
WELL OWNER NAME(S): Coterra Energy		PHONE (OPTIONAL)
WELL OWNER MAILING ADDRESS: 840 Gessner Rd. Ste. 1400		CITY: Houston STATE: TX ZIP: 77024-4152

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	35	32.0	N
LONGITUDE	103	31	9.5	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE: Section 12 Township 20s Range 34e. West of 27-A (Marathon Rd.)

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1862	James Hawley	H&R Enterprises, LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
9-3-25	9-3-25	105'	105'	N/A

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	105'	6"	No casing left in hole				

OSE DII ROSWELL NM
10 SEP '25 PM1:03

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO. CP- 2083	POD NO. 1	TRN NO. 790057	
LOCATION 20S.34E.12 411		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0'	5'	5'	Sandy Caliche	Y ✓N	
5'	10'	5'	Sand	Y ✓N	
10'	20'	10'	Caliche	Y ✓N	
20'	45'	25'	Sand	Y ✓N	
45'	50'	5'	Caliche	Y ✓N	
50'	60'	10'	Sandy Red Clay	Y ✓N	
60'	105'	45'	Red Clay	Y ✓N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

OSE DII ROSWELL NM
10 SEP '25 PM 1:03

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☑ OTHER – SPECIFY: dry hole

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

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: Depth to groundwater bore was gauged for water on 9-8-25. DTGW bore was dry. Temporary well casing was removed, bore hole was backfilled with drill cuttings to 10' BGS. Hydrated bentonite hole plug was poured from 10' BGS to surface. Lea Unit Fed #21

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Nathan Smelcer

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

James Hawley — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

9/8/25 — DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO. CP-2083	POD NO. 1	TRN NO. 790057	
LOCATION 20S. 34E. 12 411		WELL TAG ID NO. NA	PAGE 2 OF 2

U.S. Fish and Wildlife Service
National Wetlands Inventory

02. Watercourse 3.9mi from Perla Verde 31

October 8, 2025

Wetlands

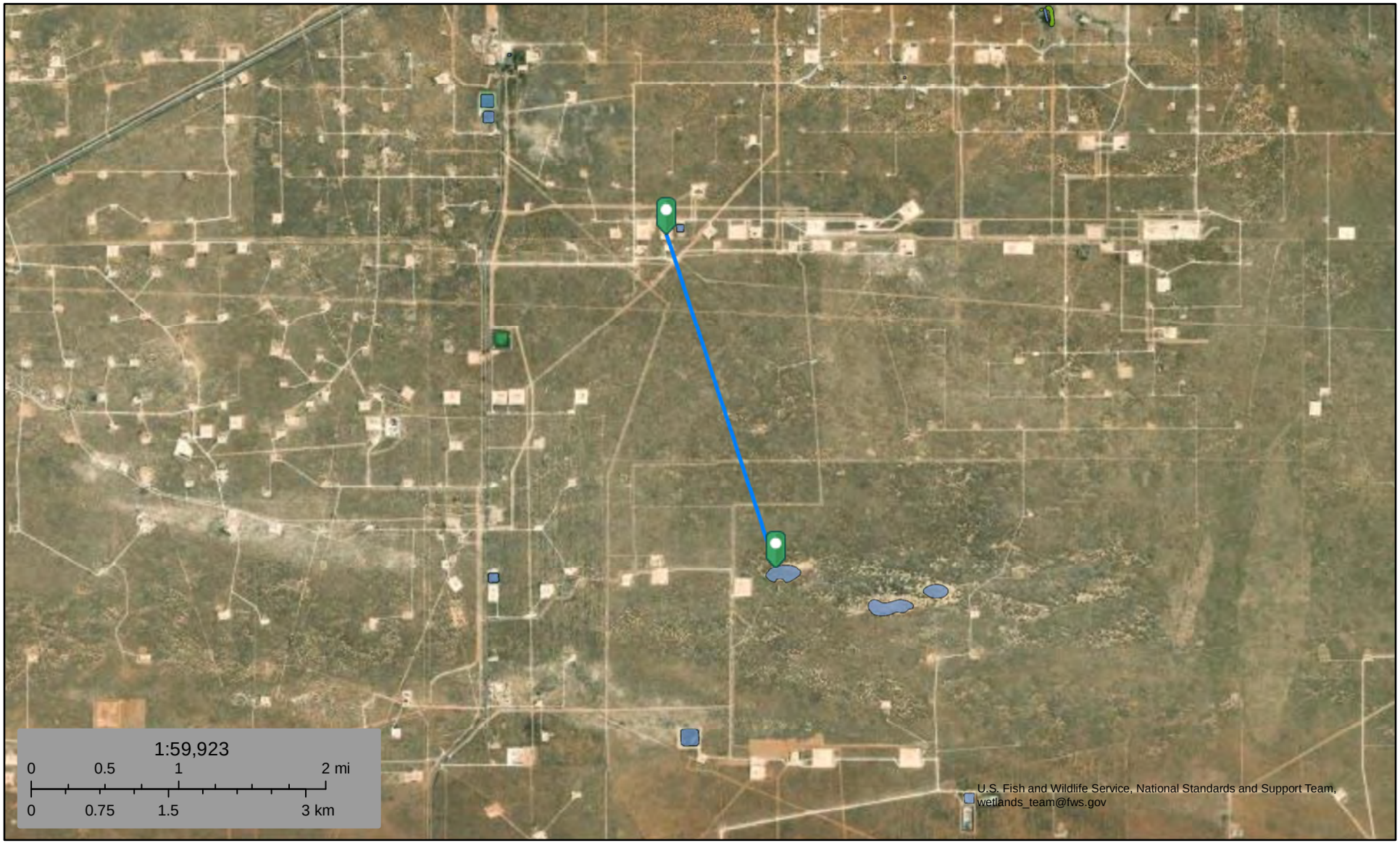
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

03. Lakebed 2.01mi Perla Verde 31 State 3H



October 8, 2025

Wetlands

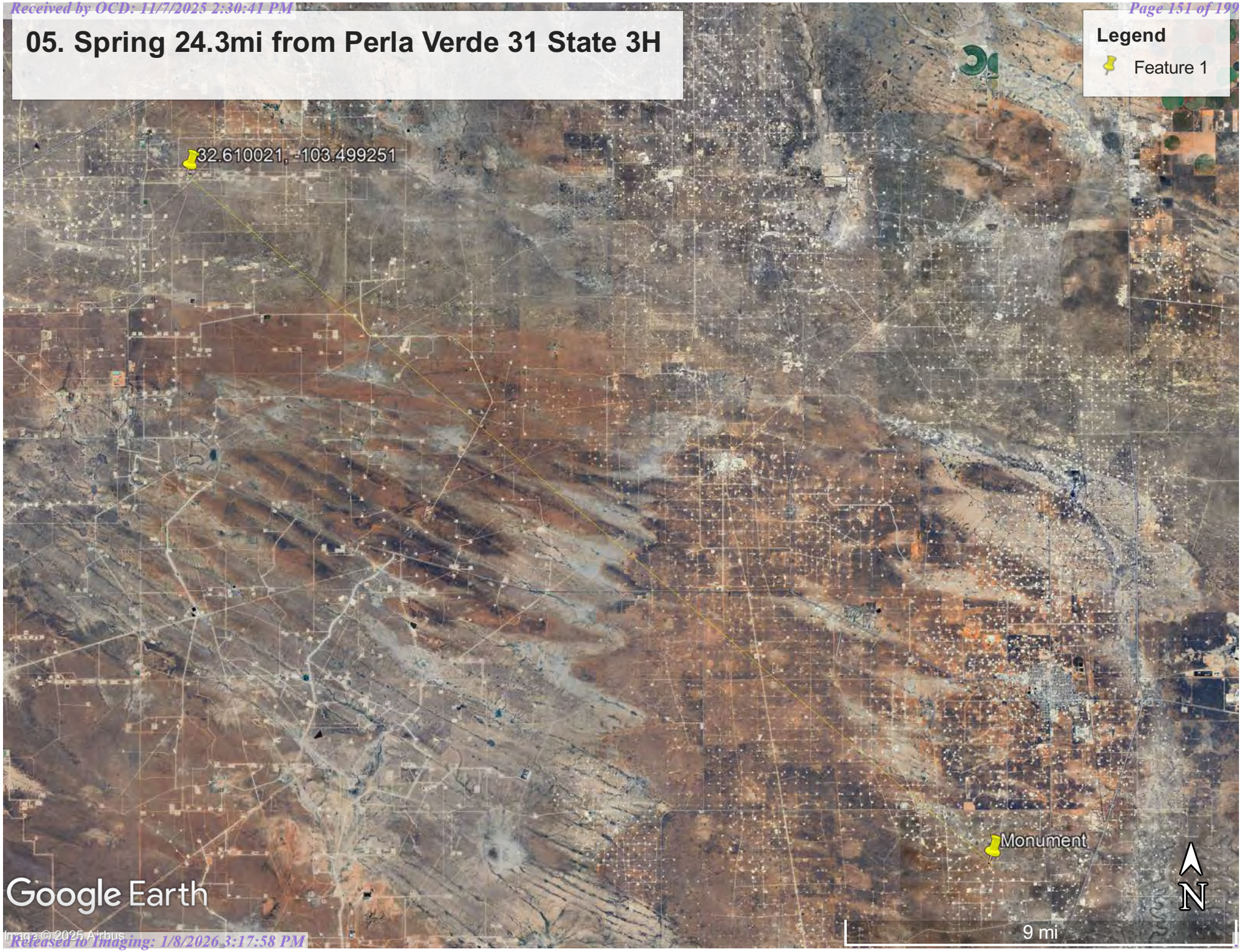
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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

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

Resident 4.13mi from Perla Verde 31 State 3H

05. Spring 24.3mi from Perla Verde 31 State 3H



U.S. Fish and Wildlife Service
National Wetlands Inventory

07. Wetland 4.53mi Perla Verde 31 State 3H

October 8, 2025

Wetlands

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

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

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

08 Perla Verde 31 State 3H Subsurface Mine 94,837 ft

11/4/2025

1:188,071

0 1.25 2.5 5 mi

0 2 4 8 km

Esri, HERE, Garmin, Earthstar Geographics

World_Boundaries_and_Places

World Imagery

Low Resolution 15m Imagery

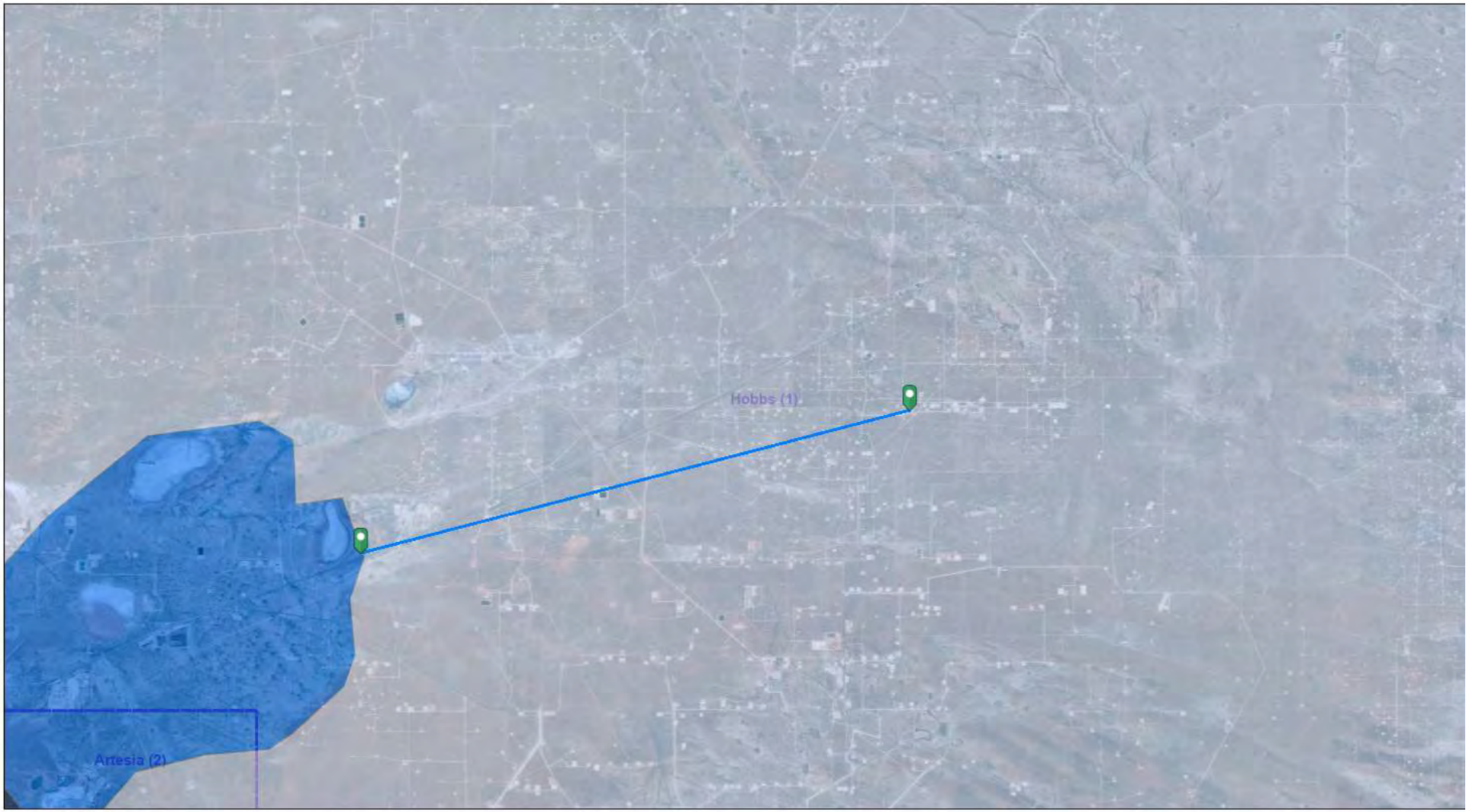
High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

38m Resolution Metadata

09 Perla Verde 31 State 3H Karst Potential 60,644 ft to Medium



11/4/2025, 5:21:43 PM

Karst Occurrence Potential

- High
- Medium
- Low
- OCD Districts

1:144,448

0 1.5 3

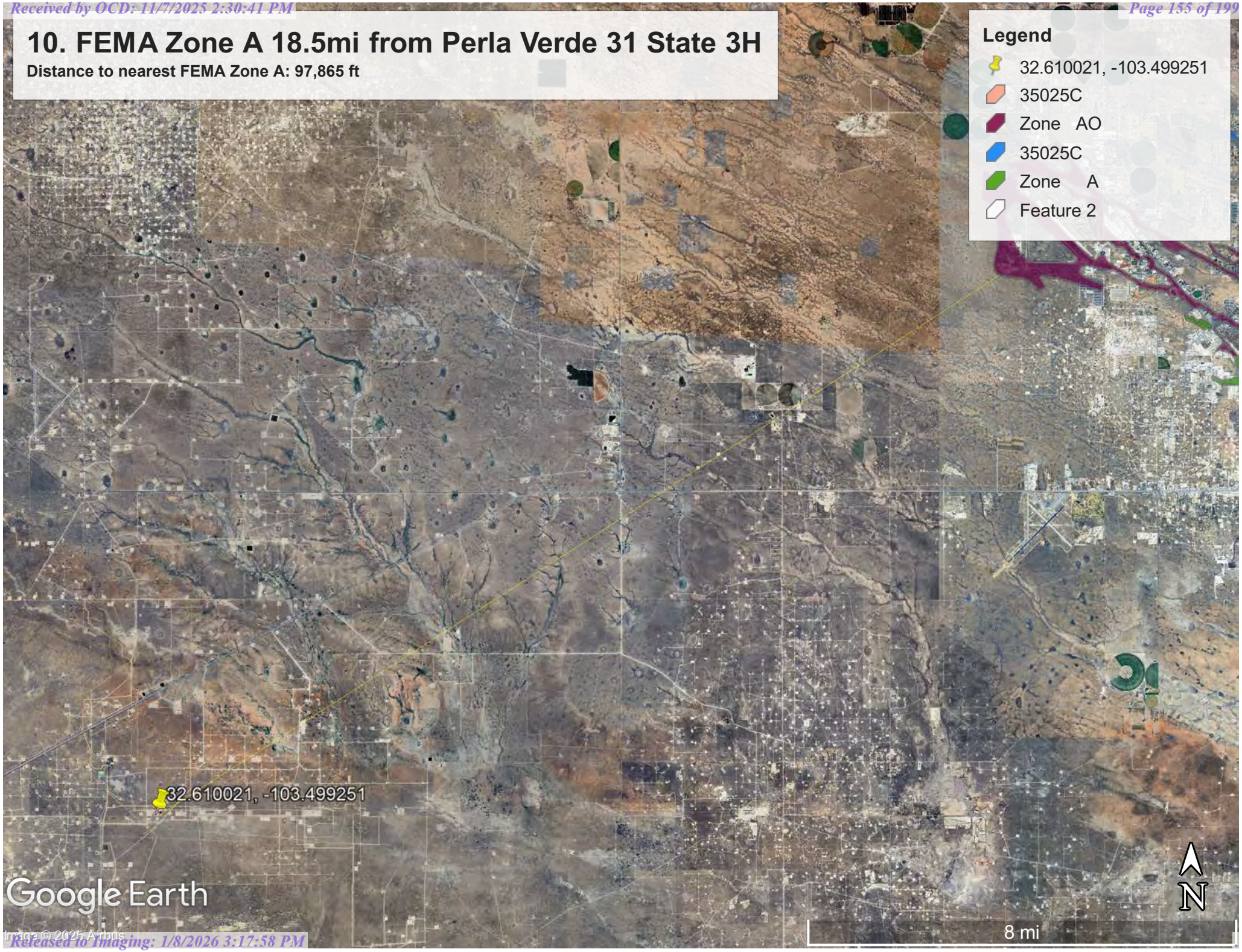
0 2.5 5

BLM, OCD, New Mexico Tech, Earthstar Ge
OCD

New Mexico Oil Conservati
NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservati

10. FEMA Zone A 18.5mi from Perla Verde 31 State 3H

Distance to nearest FEMA Zone A: 97,865 ft



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Lea County, New Mexico

October 8, 2025

Preface

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

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

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

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

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

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

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Soil Map.....9
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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 22, Sep 9, 2025

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	2.0	46.5%
PY	Pyote soils and Dune land	2.3	53.5%
Totals for Area of Interest		**4.3**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Lea County, New Mexico

KM—Kermit soils and Dune land, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpx
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Kermit

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BC022NM - Sandhills
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Palomas

Percent of map unit: 3 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Pyote

Percent of map unit: 3 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Maljamar

Percent of map unit: 2 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

PY—Pyote soils and Dune land

Map Unit Setting

National map unit symbol: dmqr
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 220 days

Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Pyote

Setting

Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

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

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 6 inches: fine sand

C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 5 percent
Ecological site: R070BC022NM - Sandhills
Hydric soil rating: No

Maljamar, fine sand

Percent of map unit: 3 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R070BD003NM - Loamy 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 —

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

MAP LEGEND

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

Soils

Soil Rating Polygons
- R070BC022NM
- R070BD003NM
- Not rated or not available

Soil Rating Lines
- R070BC022NM
- R070BD003NM
- Not rated or not available

Soil Rating Points
- R070BC022NM
- 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: Lea County, New Mexico
Survey Area Data: Version 22, Sep 9, 2025

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.

Table—Ecological Sites by Map Unit Component

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	Kermit (46%)	R070BC022NM — Sandhills	2.0	46.5%
		Dune land (44%)			
		Palomas (3%)	R070BD003NM — Loamy Sand		
		Pyote (3%)	R070BD003NM — Loamy Sand		
		Maljamar (2%)	R070BD003NM — Loamy Sand		
		Wink (2%)	R070BD003NM — Loamy Sand		
PY	Pyote soils and Dune land	Pyote (46%)	R070BD003NM — Loamy Sand	2.3	53.5%
		Dune land (44%)			
		Kermit (5%)	R070BC022NM — Sandhills		
		Maljamar, fine sand (3%)	R070BD003NM — Loamy Sand		
		Wink (2%)	R070BD003NM — Loamy Sand		
Totals for Area of Interest				**4.3**	**100.0%**

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Natural Resources
Conservation Service

Ecological site R070BC022NM
Sandhills

Accessed: 10/17/2025

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on plains. The soils are calcareous sandy eolian deposits derived from sedimentary rock. Land form of sand dunes or hillslopes. Slopes average 5 to 35 percent. Slopes are complex as the steeper slopes are shorter in length while the more gentle slopes are longer in length. Direction of slopes vary and is usually not significant. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Hill (3) Dune
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft

Slope	5–35%
Aspect	Aspect is not a significant factor

Climatic features

The climate of the area is “semi-arid continental”. 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 180 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late 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. Because of the texture of this soil, most rainfall is effective. Strong winds blow from the west and southwest from January through June which accelerates soil drying at a time 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)	220 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced by wetlands or streams.

Soil features

The soils of this site are deep and very deep. Surface textures are fine sand or loamy fine sand. Subsoilis a fine sand or loamy fine sand to a depth of 60 inches or more. These soils have less than 10 percent clay content. These soils are subject to severe wind erosion if vegetative cover is not adequate.

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

Characteristic Soils Are:
Kermit
Aguena

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Loamy fine sand (3) Loamy sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained
Permeability class	Rapid to very rapid
Soil depth	60–72 in
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	3–9 in
Calcium carbonate equivalent (0-40in)	0–7%
Electrical conductivity (0-40in)	0–2 mmhos/cm
Sodium adsorption ratio (0-40in)	0–1
Soil reaction (1:1 water) (0-40in)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	0–5%
Subsurface fragment volume >3" (Depth not specified)	0%

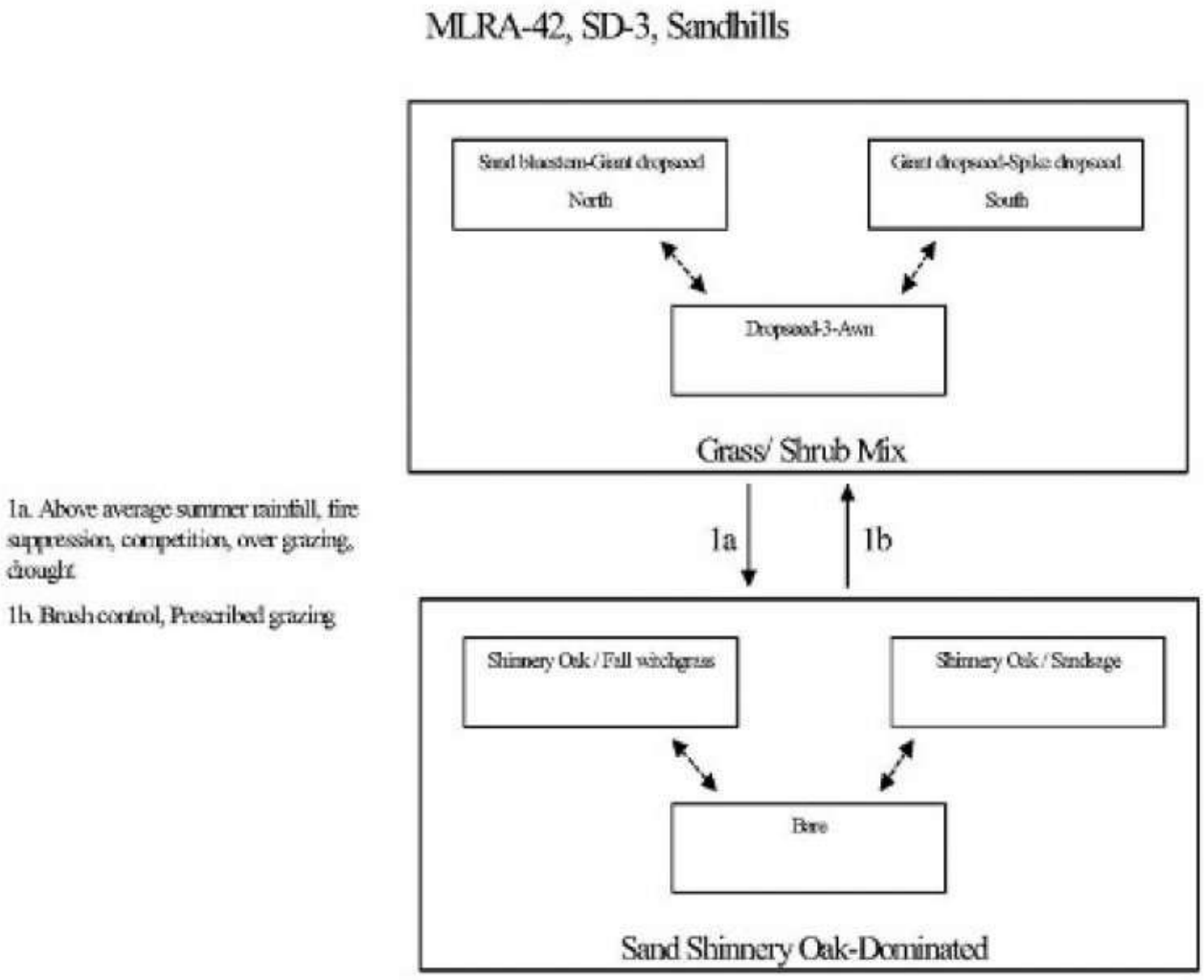
Ecological dynamics

Overview:
The Sandhills site occurs adjacent to or intergrades with the Deep Sand site. The Sandhills site is differentiated from deep sand sites by a steeper average slope, and an increased depth to a soil texture change. Sandhills slopes are usually greater than eight percent, and the soil profile is a fine sand or loamy fine sand to a depth greater than 60 inches. Deep Sand sites have slopes less than eight percent and a textural change can occur at less than 60 inches. The historic plant community of the Sandhills site is a mixture of grasses, shrubs and forbs, with tall grasses dominating in aspect. During years of abundant spring moisture, tall growing forbs occasionally reach aspect dominance.

Sand bluestem and giant dropseed are the dominant grasses, with Havard panicum and dropseeds as sub-dominants. Sand shinnery oak and soapweed yucca are the dominant shrubs. Drought favors shinnery by impacting grasses more severly. Shinnery oak's ability to store water and carbohydrates, and its strong negetive leaf water potential enable it to out compete grasses during drought conditions. Changes in historical fire regimes, competition by shrubs, and overgrazing may contribute to this site becoming dominated by sand shinnery oak.

State and transition model

Plant Communities and Transitional Pathways (diagram)



State 1
Grass/Shrub Mix

Community 1.1
Grass/Shrub Mix

Grass/Shrub Mix: The historic plant community in the northern part of the resource area (SD-3) is dominated by sand bluestem and giant dropseed, with Havard panicum as a sub-dominant. Primary grass dominance may gradually shift moving south across the resource area to a community dominated by giant dropseed and spike dropseed, with mesa dropseed as the sub-dominant grass species. Throughout the resource area sand shinnery oak and soapweed yucca are the dominant shrubs with sand sagebrush as the sub-dominant. As retrogression within this state occurs, plants such as sand bluestem, giant dropseed, Havard panicum, plains bristlegrass, sand paspalum, and fourwing saltbush decrease. This results in an increase in spike dropseed, sand dropseed, mesa dropseed, threeawns sand shinnery oak, and sand sagebrush. Continued loss of grass cover may result in a transition to a sand shinnery oak dominated state. Diagnosis: Sand bluestem or giant dropseed are dominant or present in substantial amounts. Spike dropseed, sand dropseed or mesa dropseed may be dominant in some instances. Grass cover is variable, shifting sands and large irregular dunes produce considerable variation in the spatial distribution and composition of the plant community. Grass cover is not continuous, but is fairly uniform across the more stable areas. Large natural bare areas or blowouts are a common feature on the less stable portions of the Sandhills site.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	360	585	810
Shrub/Vine	120	195	270
Forb	120	195	270
Total	**600**	**975**	**1350**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	10-15%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	20-25%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%

Bedrock	0%
Water	0%
Bare ground	45-60%

Figure 5. Plant community growth curve (percent production by month). NM2822, R042XC022NM Sandhills HCPC. R042XC022NM Sandhills HCPC warm season plant community.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	1	3	4	10	10	25	30	12	5	0	0

State 2
Sand Shinnery Oak-Dominated

Community 2.1
Sand Shinnery Oak-Dominated

Additional States: Sand Shinnery Oak -Dominated: Sand shinnery oak is the dominant species and in dense stands may reduce forage production by as much as 90 percent.1 It often forms a mosaic of dense thickets interspersed with occasional motts of taller oaks, large areas of bare ground, and concentrations of sand sagebrush. Sand shinnery oak is well suited to deep sandy soils. The height and cover of oak decreases as sand depth decreases or clay content increases. The aggressive nature of fall witchgrass and continued loss of more palatable grasses and threeawn species may result in a sand shinnery oak-fall witchgrass community. Burning may result in a community with very little grass or sand shinnery oak (bare). Sand shinnery oak usually recovers due to its ability to sprout aggressively following fire. Diagnosis: Sand shinnery oak is the dominant species. Grass cover is sparse and patchy. Shrub cover is high. Blowouts and bare areas are common, however, high shrub cover mediates erosion. Transition to Sand Shinnery Oak Dominated (1a): Climate may play a role in facilitating the spread sand shinnery oak. It is best adapted to those areas that receive and average of 16 inches of annual rainfall; it may therefore gain a competitive advantage during cycles of above average precipitation. Sand shinnery oak spreads mainly by elongation of rhizomes, but in some instances will reproduce by seed. The establishment and survival of seedlings is limited to those years with abundant rainfall during the months of July and August. If fire historically played a part in suppressing the density and distribution of shrubs in desert grasslands, then fire suppression may facilitate a shift to shrub dominance.2 Competition for resources between grasses and shrubs may be a factor in increased densities of sand shinnery oak. 1 Sand shinnery oak has an extensive system of underground roots and stems that can uptake and store water for growth during drier periods, allowing it to increase, at times when grasses decrease. Evidence of competitive suppression of grasses is indicated by increases in herbaceous vegetation following chemical control of sand shinnery oak.1 However, this increase may in part be due to a flush of nutrients made available from the decomposing biomass of woody roots and stems. Loss of grass cover due to overgrazing

or drought may give a competitive advantage to sand shinnery oak. Key indicators of approach to transition: * A decrease in the tall grass species and the associated increase in threeawns may be indicative of the initial stage of transition to a shrub-dominated state. * Increased cover of sand shinnery oak. Transition back to Grass/Shrub Mix (1b) Chemical brush control is an effective means of controlling sand shinnery oak and sand sagebrush. Where large areas of chemical control are planned, increased erosion and the effect on loss of wildlife habitat should be considered. Prescribed grazing will help ensure an adequate deferment period to allow grass recovery and subsequent proper forage utilization. There have been studies that suggest long term browsing by goats can reduce sand shinnery oak, altering production in favor of grasses.3

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1				195–293	
	sand bluestem	ANHA	*Andropogon hallii*	195–293	–
	Havard's panicgrass	PAHA2	*Panicum havardii*	195–293	–
	giant dropseed	SPGI	*Sporobolus giganteus*	195–293	–
2				146–195	
	spike dropseed	SPCO4	*Sporobolus contractus*	146–195	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	146–195	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	146–195	–
3				49–98	
	thin paspalum	PASE5	*Paspalum setaceum*	49–98	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	49–98	–
4				29–49	
	threeawn	ARIST	*Aristida*	29–49	–
	mat sandbur	CELO3	*Cenchrus longispinus*	29–49	–
	flatsedge	CYPER	*Cyperus*	29–49	–
5				29–49	
	Grass, perennial	2GP	*Grass, perennial*	29–49	–
Shrub/Vine					
6				49–98	
	Havard oak	QUHA3	*Quercus havardii*	49–98	–
7				49–98	

7				49–98	
	soapweed yucca	YUGL	*Yucca glauca*	49–98	–
8				29–49	
	sand sagebrush	ARFI2	*Artemisia filifolia*	29–49	–
9				20–49	
	fourwing saltbush	ATCA2	*Atriplex canescens*	20–49	–
10				20–49	
	rabbitbrush	CHRYS9	*Chrysothamnus*	20–49	–
11				20–49	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	20–49	–
Forb					
12				20–49	
	featherplume	DAFO	*Dalea formosa*	20–49	–
13				29–49	
	sundrops	CALYL	*Calylophus*	29–49	–
	phlox heliotrope	HECO5	*Heliotropium convolvulaceum*	29–49	–
	sharpleaf penstemon	PEAC	*Penstemon acuminatus*	29–49	–
14				20–49	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	20–49	–
	lemon beebalm	MOCI	*Monarda citriodora*	20–49	–
16				29–49	
	hymenopappus	HYMEN4	*Hymenopappus*	29–49	–
	blazingstar	MENTZ	*Mentzelia*	29–49	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	29–49	–
17				20–49	
	sunflower	HELIA3	*Helianthus*	20–49	–
18				20–49	
	buckwheat	ERIOG	*Eriogonum*	20–49	–
19				20–49	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	20–49	–

Animal community

This site provides habitat which support a resident animal community that is characterized by pronghorn antelope, black-tailed jackrabbit, Ord's kangaroo rat, Northern grasshopper mouse, Southern Plains woodrat, swift fox, roadrunner, meadowlark, lark bunting, ferruginous hawk, lesser prairie chicken, mourning dove, scaled quail, sand dune lizard, marbled whiptail, ornate box turtle, bullsnake and Western diamondback rattlesnake. Grasshopper and vesper sparrows utilize the site during migration. The ferruginous hawk sometimes nests on dunes associated with the site. White-tailed deer are also sometimes associated with this site (Mescalero Sands). Where mesquite invades, resident species of birds such as white-necked raven, roadrunner, pyrrhuloxia, mourning dove, and Harris hawk nest. Where sand hummocks form around shrubs, rodent populations and their predators increase. Fourwing saltbush, shinnery oak, sand sagebrush, and mesquite provide protective cover for scaled quail. Seed, green herbage, and fruit from a variety of grasses, forbs, and shrubs provide food for a number of birds and mammals, including mourning dove, scaled quail, lessor prairie chicken and antelope.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydrolic cover conditions and hydrologic soil groups.

Hydrologic Interpretations
Soil Series------- Hydrologic Group
Kermit---------- A
Aguena---------- A

Recreational uses

This site offers recreation potential for hiking, horseback riding, nature observation and photography. This site also offers opportunities for hunting of such species as quail, dove and antelope.

Mechanical, off-road vehicle use by dune buggies, four wheelers, or motor bikes is site-destructive, resulting in severe soil movement by wind erosion. Off-road vehicle use should be confined to those areas which are already deterioriated and where intensive management for soil protection can be practiced.

During years of abundant spring moisture, this site desplays a colorful array of wildflowers during May and June. A few showy summer and fall flowers also occur.

Wood products

The plant community associated with this site affords little or no wood products.

Other products

This site is suitable for grazing during all seasons of the year by all kinds and classes of livestock. Where shinnery oak has increased considerably above the amount in the potential plant community cattle loss can occur if grazed during the late bud and early leaf stage. This site responds well to an integrated brush management and grazing management. Brush management is inappropriate in occupied or potential habitat for sand dune lizard. Mismannagement of this site will cause a decrease in Harvard panicum, sand bluestem, giant dropseed, plains bristlegrass, sand paspalum and fourwing saltbush. There will be a corresponding increase in dropseeds, sand sagebrush and shinnery oak. When shinnery oak is not a problem, this site responds best to a system of mangement that rotates the season of use. Grazing management plans should be design to leave adequate residual cover for lesser prairie chicken nesting.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index----- Ac/AUM
100 - 76---------- 2.0 – 4.0
75 – 51---------- 3.0 – 6.5
50 – 26---------- 5.0 – 12.0
25 – 0---------- 12.0 - +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains (SD-3) Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: South Chaves, Eddy, Lea and Otero Counties.

Other references

Literature Cited:

1. Sears, W.E., C.M. Britton, D.B. Wester, and R.D. Pettit. 1986. Herbicide conversion of a sand shinnery oak (Quercus havardii) community: effects on biomass. J. Range. Manage. 39: 399-403.

2. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, September). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ [accessed 1/07/02].

3.Villena, F. and J.A. Pfister. 1990. Sand shinnery oak as forage for Angora and Spanish goats. J. Range. Manage. 43: 116-122.

Contributors

David Trujillo
Don Sylvester

Rangeland health reference sheet

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

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

Indicators

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

   _____

2. **Presence of water flow patterns:**

   _____

3. **Number and height of erosional pedestals or terracettes:**

   _____

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

   _____

5. **Number of gullies and erosion associated with gullies:**

   _____

6. **Extent of wind scoured, blowouts and/or depositional areas:**

---

7. **Amount of litter movement (describe size and distance expected to travel):**

---

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

---

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

---

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

---

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

---

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

    Dominant:

    Sub-dominant:

    Other:

    Additional:

---

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**

---

14. **Average percent litter cover (%) and depth (in):**

---

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

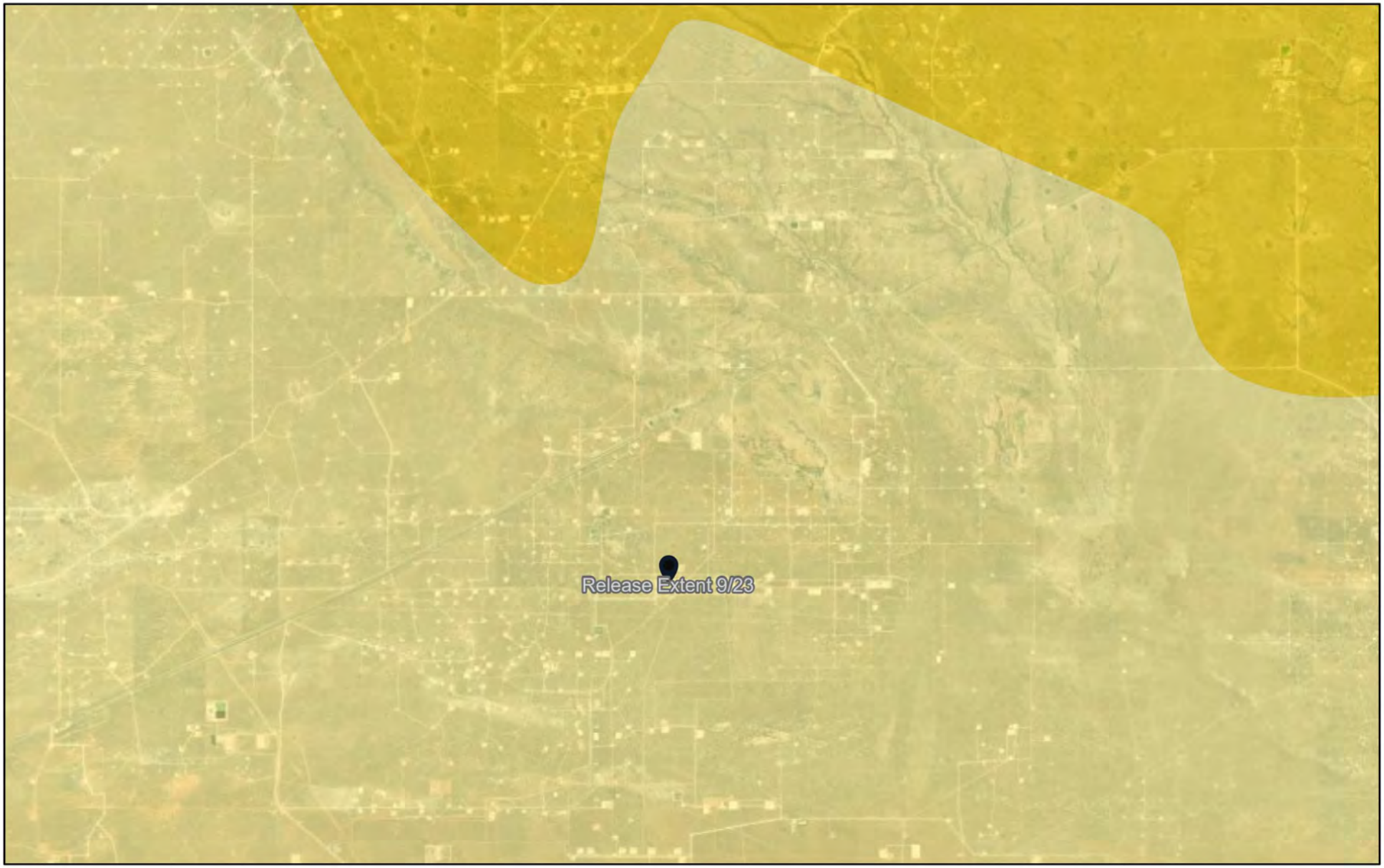
---

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:**

---

17. **Perennial plant reproductive capability:**

Perla Verde 31 State 3H, Qe, Eolian and Piedmont Deposits



10/17/2025

1:142,191

World_Boundaries_and_Places

Geology of North America

Quaternary

Neogene

Release Extent

Release Extent

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

38m Resolution Metadata

0 1 2 4 mi

0 1.5 3 6 km

Esri, HERE, Garmin, Earthstar Geographics

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

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2526640097**
Incident Name	**NAPP2526640097 PERLA VERDE 31 STATE COM #003H @ 30-025-41862**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-41862] PERLA VERDE 31 STATE COM #003H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PERLA VERDE 31 STATE COM #003H
Date Release Discovered	09/21/2025
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Well | Crude Oil | Released: 1 BBL | Recovered: 0 BBL | Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Well | Produced Water | Released: 11 BBL | Recovered: 2 BBL | Lost: 9 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)	packing failure at wellhead

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 11/07/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	12000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	73006
GRO+DRO (EPA SW-846 Method 8015M)	61306
BTEX (EPA SW-846 Method 8021B or 8260B)	51.4
Benzene (EPA SW-846 Method 8021B or 8260B)	0.2
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	10/07/2025
On what date will (or did) the final sampling or liner inspection occur	10/27/2025
On what date will (or was) the remediation complete(d)	10/27/2025
What is the estimated surface area (in square feet) that will be reclaimed	7113
What is the estimated volume (in cubic yards) that will be reclaimed	489
What is the estimated surface area (in square feet) that will be remediated	7113
What is the estimated volume (in cubic yards) that will be remediated	480
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 11/07/2025
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 (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**519559**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**10/27/2025**
What was the (estimated) number of samples that were to be gathered	**2**
What was the sampling surface area in square feet	**400**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	7113
What was the total volume (cubic yards) remediated	489
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	7113
What was the total volume (in cubic yards) reclaimed	489
Summarize any additional remediation activities not included by answers (above)	Excavation occurred on pad to address impacted soil identified during Site assessment activities. All final confirmation soil samples meet the strictest Closure Criteria.

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: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 11/07/2025

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 524525

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 524525
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	1/8/2026