Location:	**Corral Canyon FED 001H**	
Spill Date:	**9/22/2025**	
Incident #:	nAPP2526632539	

Area 1		
Approximate Area =	884	sq. ft.
Average Saturation (or depth) of spill =	6	inches
Average Porosity Factor =	0.1	
VOLUME OF LEAK		
Total Crude Oil =	5.55	bbls
Total Produced Water =	8.32	bbls
Area 2		
Approximate Area =		sq. ft.
Average Saturation (or depth) of spill =		inches
VOLUME OF LEAK		
Total Crude Oil =		bbls
Total Produced Water =		bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**5.55**	**bbls**
Total Produced Water =	**8.32**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**2.4**	**bbls**
Total Produced Water =	**3.6**	**bbls**

Incident ID: nAPP2526632539

Release Assessment and Closure

Corral Canyon Federal Com #001H

Section 06, Township 25 South, Range 29 East

API: 30-015-43428

County: Eddy

Vertex File Number: 25A-05224

Prepared for:
ExxonMobil Production Company

Prepared by:
Vertex Resource Services Inc.

Date:
December 2025

Release Assessment and Closure
Corral Canyon Federal Com #001H
Section 06, Township 25 South, Range 29 East
API: 30-015-43428
County: Eddy

Prepared for:
ExxonMobil Production Company
3104 East Greene Street
Carlsbad, New Mexico 88220

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

Prepared by:
Vertex Resource Services Inc.
3101 Boyd Drive
Carlsbad, New Mexico 88220

Riley Arnold

12/8/2025

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

Date

Chad Hensley

12/8/2025

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

Date

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1.0 Introduction

ExxonMobil Production Company (Exxon) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water and crude oil release that occurred on September 22, 2025, at Corral Canyon Federal Com #001H, API 30-015-43428, (hereafter referred to as the "site"). Exxon submitted an initial C-141 Release Notification to New Mexico Oil Conservation Division (NMOCD) District 2 on September 23, 2025. Incident ID number nAPP2526632539 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 22, 2025, due to equipment malfunction on the well-head. The incident was reported on September 23, 2025, and involved the release of approximately 14 barrels (bbl) of total fluid containing approximately 6 bbl of crude oil and 8 bbl of produced water released onto the production pad. Approximately 6 bbl of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

3.0 Site Characteristics

The site is located approximately 10.1 miles south of Loving, New Mexico. The legal location for the site is Section 06, Township 25 South and Range 29 East in Eddy County, New Mexico. The release area is located on Bureau of Land Management property. An aerial photograph and site schematic are presented on Figure 1.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2025) indicates the site's surface geology primarily comprises Rustler Formation, an evaporitic layer. Predominant soil texture on the site is Loamy Sand. Additional soil characteristics include a drainage class of well drained with a runoff class of very low. The karst geology potential for the site is Medium (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, interdunes, and plains with elevations ranging between 3,000 and 5,000 feet. The climate is semiarid with average annual precipitation ranging between 10 and 15 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be shrubs with interspersed grasses. Black grama grasses dominate the historical plant community (United States Department of

Agriculture, Natural Resources Conservation Service, 2025). 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 depth to groundwater reference to the site is a New Mexico Office of the State Engineer (NMOSE) well located approximately 0.01 miles east of the location (United States Geological Survey, 2025). Data from 2020 shows the USGS borehole recorded a depth to groundwater of 37 feet below ground surface (bgs). The well was plugged and abandoned on November 18, 2020, according to the bore log. 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 the Pecos River located approximately 0.39 miles east of the site (United States Fish and Wildlife Service, 2025).

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

Table 1. Closure Criteria Determination			
Site Name: Corral Canyon Fed Com 1H			
Spill Coordinates: 32.15255331,-104.0167226		**X: 592723**	**Y: 3557768**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**37**	feet
	Distance between release and nearest DTGW reference	**120**	feet
		0.01	miles
	Date of nearest DTGW reference measurement	**November 18, 2020**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	2,065	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	13,369	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	19,921	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	17,021	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	1,983	feet
8	Within the area overlying a subsurface mine	No	feet
	Distance between release and nearest registered mine	16,866	feet
9	Within an unstable area (Karst Map)	**Medium**	Critical High Medium Low
	Distance between release and nearest unstable area	**0**	feet
10	Within a 100-year Floodplain	500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	1,316	feet
11	Soil Type	Pajrito Complex	
12	Ecological Classification	Loamy Sand	
13	Geology	Rustler Formation	
	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 2. 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

DTGW – depth to groundwater
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 26, 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 2,053 square feet. The Daily Field Report associated with the site inspection is included in Appendix B. Characterization results are presented in Table 3.

Remediation efforts began on October 16, 2025, and were finalized on November 20, 2025. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 16 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 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. Daily Field Reports 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 16, 2025. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 16 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).

5.1 Variance Request

Of the 16 samples collected, three samples exceeded site criteria. On November 3 and 20, 2025, Vertex personnel resampled the areas of exceedance and the samples were submitted to Cardinal Laboratory. All confirmatory samples collected and analyzed were below closure criteria for the site. Due to communication errors, these samples were collected without proper sample notifications. The sampling notification for November 3, 2025, was submitted under the incident ID nAPP2519250010. The sampling notification submitted on November 18 was submitted for November 21, but samples were mistakenly collected on November 20. On December 11, 2025, Vertex Resource Services, Inc., on behalf of Exxon Mobil Production Company, requested a variance be grated for three confirmation samples: BS25-05, BS25-07, and BS25-08 adjacent to the production equipment. Notifications and approval are included in Appendix D. Laboratory results are presented in Table 4, indicated by an asterisk, and laboratory data reports are included in Appendix C.

6.0 Closure Request

The release area was fully delineated, remediated, and backfilled with local soil by November 20, 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 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@vertexresource.com.

7.0 References

Google Inc. (2025). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from https://earth.google.com

New Mexico Bureau of Geology and Mineral Resources. (2025). *Interactive Geologic Map*. Retrieved from https://maps.nmt.edu/

New Mexico Department of Surface Water Quality Bureau. (2025). *Assessed and Impaired Waters of New Mexico*. Retrieved from https://gis.web.env.nm.gov/oem/?map=swqb

New Mexico Energy, Minerals and Natural Resources Department. (2025). *OCD Permitting - Spill Search*. Retrieved from https://wwwapps.emnrd.nm.gov/ocd/ocdpermitting/Data/Spills/Spills.aspx

New Mexico Office of the State Engineer. (2025a). *Point of Diversion Location Report - New Mexico Water Rights Reporting System*. Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/wellSurfaceDiversion.html

New Mexico Office of the State Engineer. (2025b). *Water Column/Average Depth to Water Report - New Mexico Water Rights Reporting System*. Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html

New Mexico Office of the State Engineer. (2025c). *Well Log/Meter Information Report - New Mexico Water Rights Reporting System*. Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/meterReport.html

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

United States Department of Agriculture, Natural Resources Conservation Service. (2025). *Web Soil Survey*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

United States Department of Homeland Security, Federal Emergency Management Agency. (2025). *FEMA Flood Map Service: Search by Address*. Retrieved from https://msc.fema.gov/portal/search?AddressQuery=malaga%20new%20mexico#searchresultsanchor

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

United States Fish and Wildlife Service. (2025). *National Wetland Inventory - Surface Waters and Wetlands*. Retrieved from https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

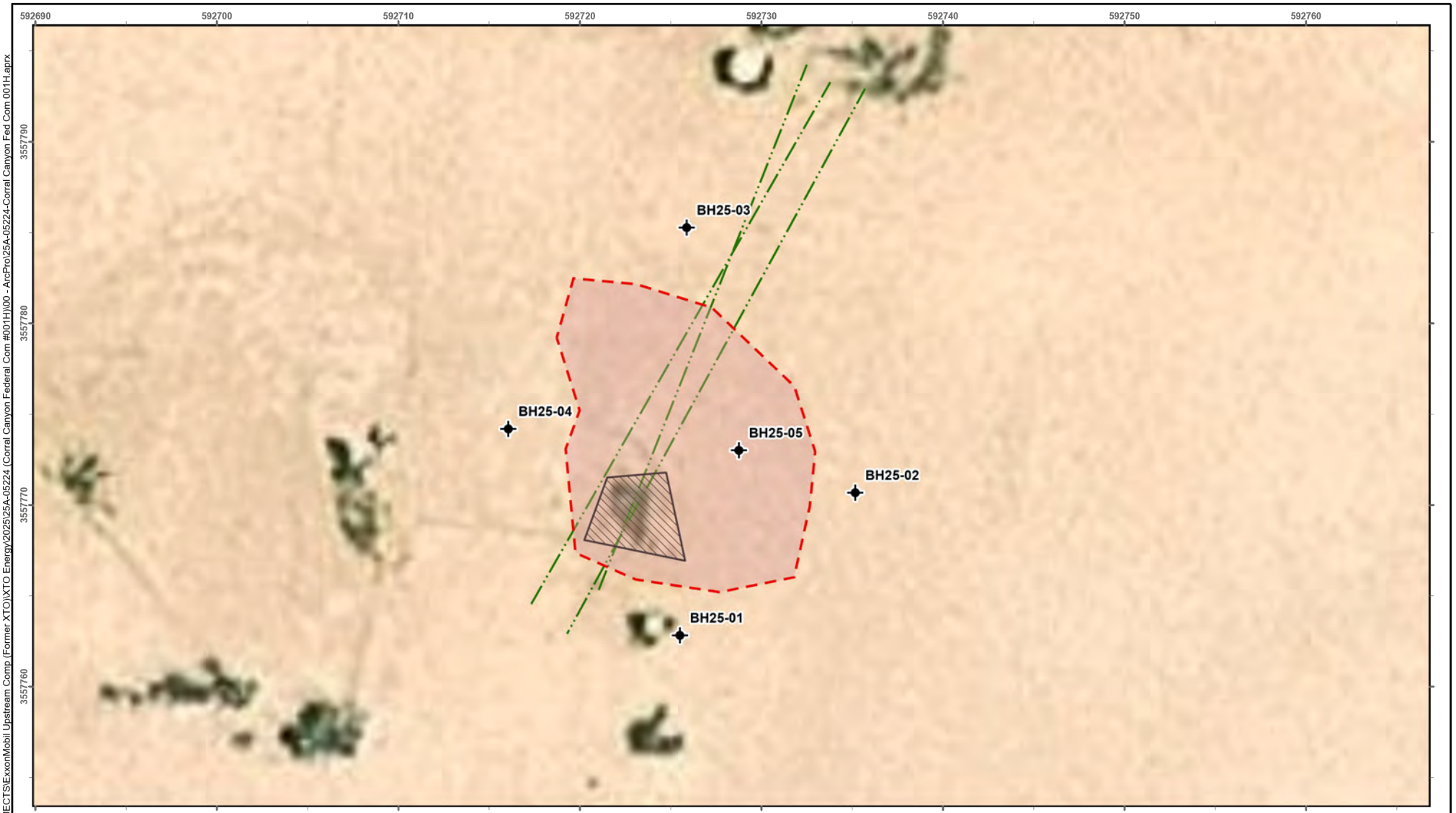
United States Geological Survey. (2025). *National Water Information System: Web Interface*. Retrieved from https://waterdata.usgs.gov/nwis

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 Bureau of Land Management, 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



Borehole
Electrical line (Underground)
Production Equipment
Release Extent (~2,051 sq.ft.)

VERTEX

0 10 20 ft.
NAD 1983 UTM Zone 13N
Date: Oct 23/25

Map Center:
Lat: 32.152609°N,
Long:104.016673°W

N

Characterization Site Sampling Schematic
Corral Canyon Federal Com #001H

FIGURE:
1

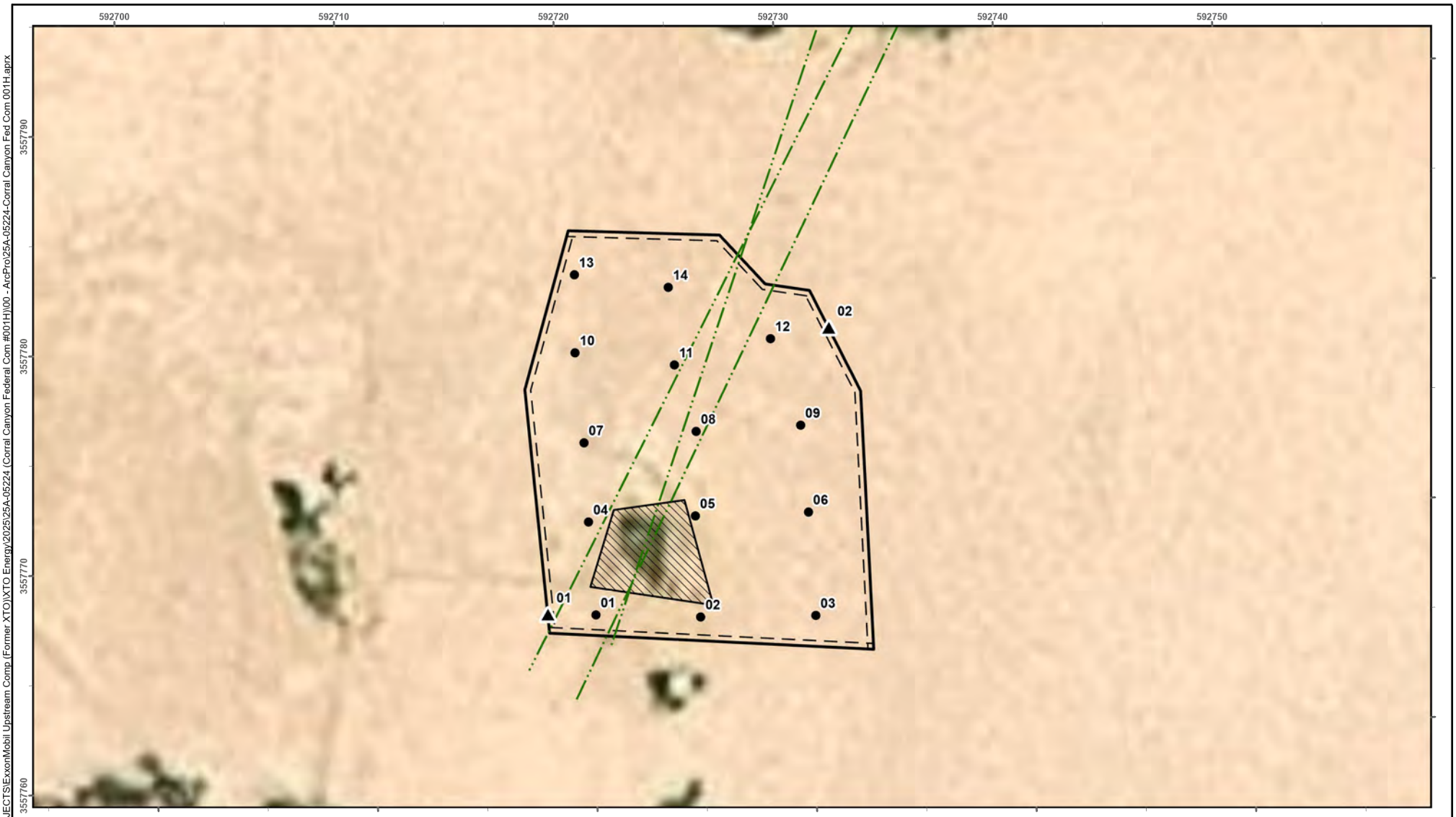
ExxonMobil

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-05224 (Corral Canyon Federal Com #001H)\00 - ArcPro\25A-05224-Corral Canyon Fed Com 001H.aprx



Base Sample (Prefixed by "BS25-")

Wall Sample (Prefixed by "WS25-")

Electrical line (Underground)

Production Equipment

Excavation to 1' bgs (~2,755 sq.ft. | 204 ft.)

VERTEX

0 10 20 ft.

NAD 1983 UTM Zone 12N

Date: Oct 23/25

Map Center:
Lat: 32.152614°N,
Long:104.016685°W

N

Confirmation Site Sampling Schematic
Corral Canyon Federal Com #001H

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-05224 (Corral Canyon Federal Com #001H)\00 - ArcPro\25A-05224-Corral Canyon Fed Com 001H.aprx

TABLES

Client Name: ExxonMobil Production Company
Site Name: Corral Canyon Federal Com #001H
NMOCD Tracking #: nAPP2526632539
Project #: 25A-05224
Lab Report: H256155

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							
BH25-01	0	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	432
	1	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	560
BH25-02	0	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	192
	1	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	288
BH25-03	0	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	432
	1	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	**768**
BH25-04	0	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	64
	1	October 1, 2025	ND	ND	ND	ND	ND	ND	ND	528
BH25-05	0.5	October 1, 2025	ND	ND	ND	**737**	**157**	**737**	**894**	**3120**
	1	October 1, 2025	ND	ND	ND	36.8	ND	36.8	36.8	432

"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: Corral Canyon Federal Com #001H
NMOCD Tracking #: nAPP2526632539
Project #: 25A-05224
Lab Reports: H256685, H256778, H256943, & H257372

Table 4. Confirmitory 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	1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	176
BS25-02	1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	208
BS25-03	1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	512
BS25-04	1	October 21, 2025	ND	ND	ND	25.1	ND	25.1	25.1	288
BS25-05	1	October 21, 2025	ND	ND	ND	**107**	28	**107**	**135**	432
	1*	November 3, 2025	ND	ND	ND	16.2	ND	16.2	16.2	592
BS25-06	1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	400
BS25-07	1	October 21, 2025	ND	ND	ND	92.4	25.3	92.4	**117.7**	272
	1*	November 3, 2025	ND	ND	ND	22.9	ND	22.9	22.9	592
BS25-08	1	October 21, 2025	ND	ND	ND	98.3	27.4	98.3	**125.7**	432
	1	November 3, 2025	ND	ND	ND	58.6	16.1	74.7	74.7	**640**
	1.1*	November 20, 2025	ND	ND	ND	ND	ND	ND	ND	176
BS25-09	1	October 21, 2025	ND	ND	ND	34.8	ND	34.8	34.8	384
BS25-10	1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	224
BS25-11	1	October 21, 2025	ND	ND	ND	35.2	ND	35.2	35.2	304
BS25-12	1	October 21, 2025	ND	ND	ND	60.9	16.6	60.9	77.5	336
BS25-13	1	October 21, 2025	ND	ND	ND	13.8	ND	13.8	13.8	368
BS25-14	1	October 27, 2025	ND	ND	ND	ND	ND	ND	ND	416
WS25-01	0-1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	432
WS25-02	0-1	October 21, 2025	ND	ND	ND	ND	ND	ND	ND	400
BACKFILL	N/A	October 27, 2025	ND	ND	ND	ND	ND	ND	ND	128

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

APPENDIX A – Closure Criteria Research Documentation

Closure Criteria Determination			
Site Name: Corral Canyon Fed Com 1H			
Spill Coordinates: 32.15255331,-104.0167226		X: 592723	Y: 3557768
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	37	feet
	Distance between release and nearest DTGW reference	120	feet
		0.01	miles
	Date of nearest DTGW reference measurement	November 18, 2020	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	2,065	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	13,369	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	19,921	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	17,021	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	1,983	feet
8	Within the area overlying a subsurface mine	No	feet
	Distance between release and nearest registered mine	16,866	feet
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
	Distance between release and nearest unstable area	0	feet
10	Within a 100-year Floodplain	500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	1,316	feet
11	Soil Type	Pajrito Complex	
12	Ecological Classification	Loamy Sand	
13	Geology	Rustler Formation	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

01. DTGW 120ft from Corral Canyon Fed Com 1

10/6/2025, 10:36:18 AM

Override 1

OSE Water PODs

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4493

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	9'	9.09"	N
	LONGITUDE	-104°	0'	58.81"	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

SE NE SE Sec. 6 T25S R29E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
11/18/2020	11/18/2020	temporary well material	57	±39

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

STATIC WATER LEVEL IN COMPLETED WELL (FT): 37.05

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

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	57	±8.5	Boring- HSA	--	--	--	--

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
				OSE DII DEC 17 2020 PM3:30	

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4484	POD NO. 1	TRN NO. 681638	
LOCATION 444 T25S R29E Sec6		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	1	1	Caliche, Poorly consolidated, with gravel, Off -White -Light Brown	Y ✓ N	
1	2	1	Sand, Very fine- grained,poorly-graded, with caliche ,Brown	Y ✓ N	
2	14	12	Caliche, Moderately consolidated, with gravel, Off -White -Light Brown, Moist	Y ✓ N	
14	29	15	Siltstone, poorly consolidated, low plasticity, cohesive, with sand, Brown, Moist	Y ✓ N	
29	57	28	Silty Sandstone, Very fine-grained, well consolidated, trace pebbles, wet	✓ Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

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: Temporary well materials removed and the soil boring plugged using Portland Type I/II neat cement 94 lbs sack per 5.2 gallons of water.
Logs adapted from LTE on-site geologist.

OSE DIT DEC 17 2020 PM3:30

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

Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 12/15/20

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4484	POD NO. 1	TRN NO. 681638	
LOCATION 444 T25R29E Sec6		WELL TAG ID NO. NA	PAGE 2 OF 2

U.S. Fish and Wildlife Service
National Wetlands Inventory

02. 0.39mi to the Pecos River from Corral Canyon Fed Com 1H

October 6, 2025

Wetlands

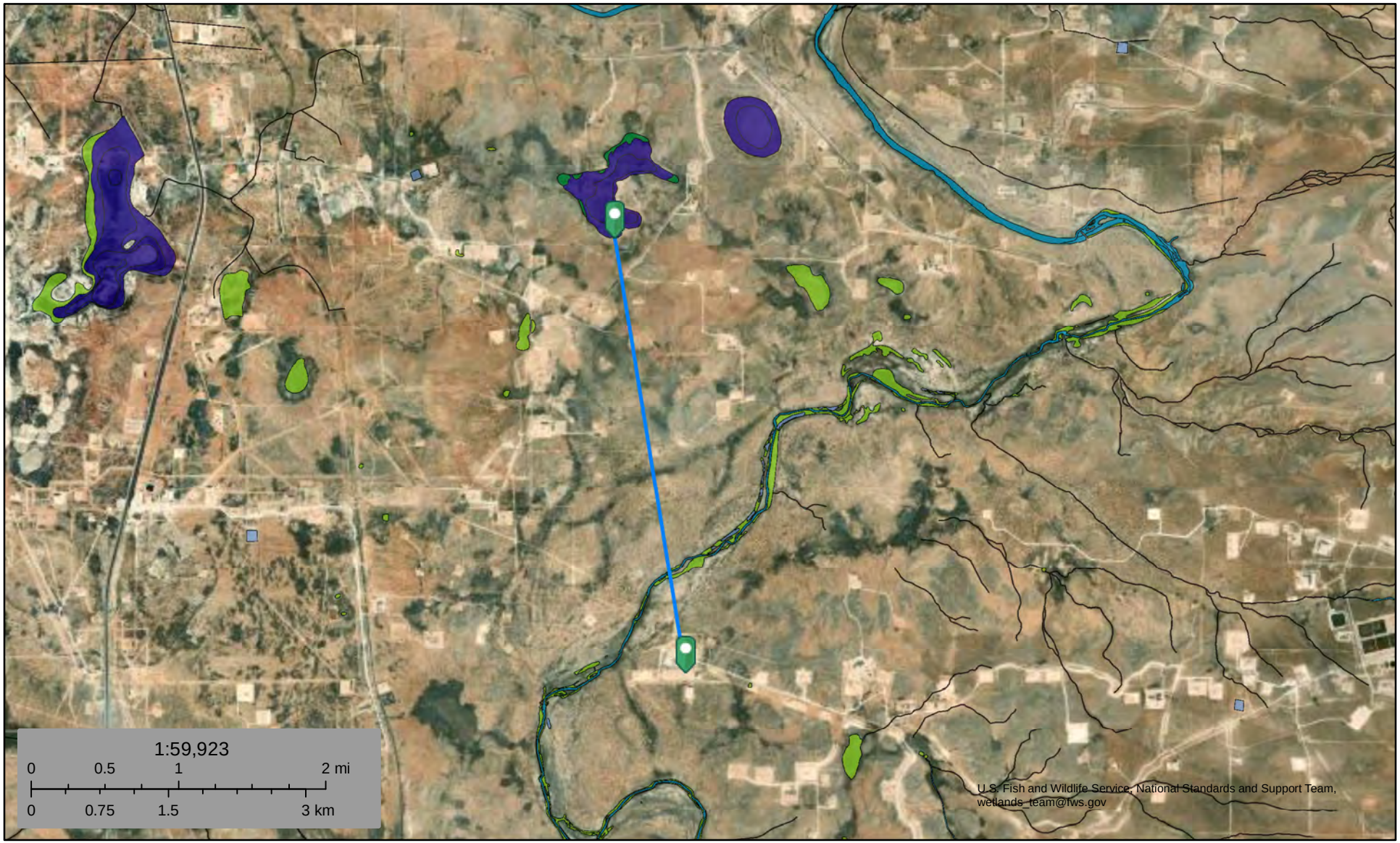
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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.

U.S. Fish and Wildlife Service

National Wetlands Inventory

03. 2.53mi to the nearest lake from Corral Canyon Fed Com 1H



October 6, 2025

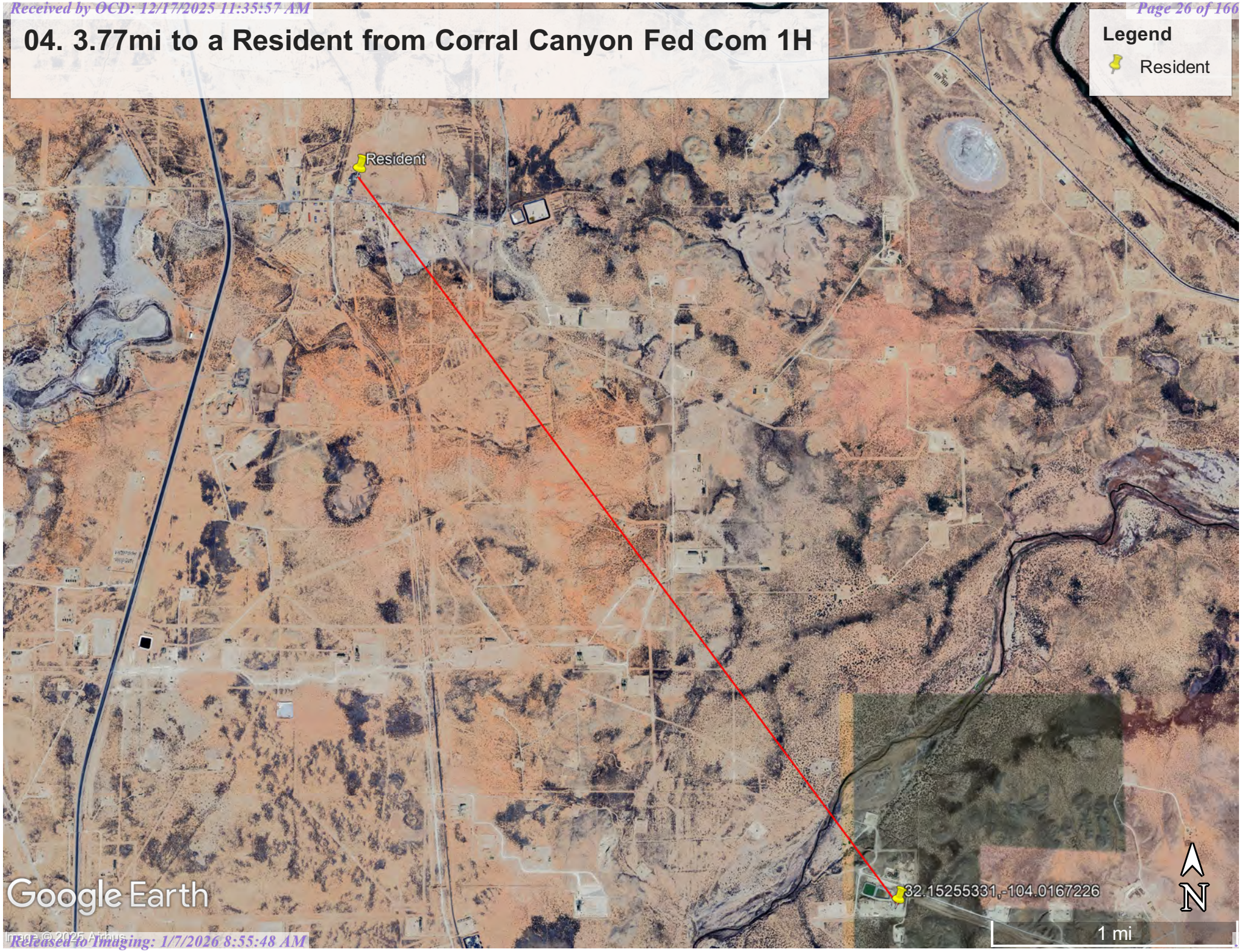
Wetlands

- 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

04. 3.77mi to a Resident from Corral Canyon Fed Com 1H

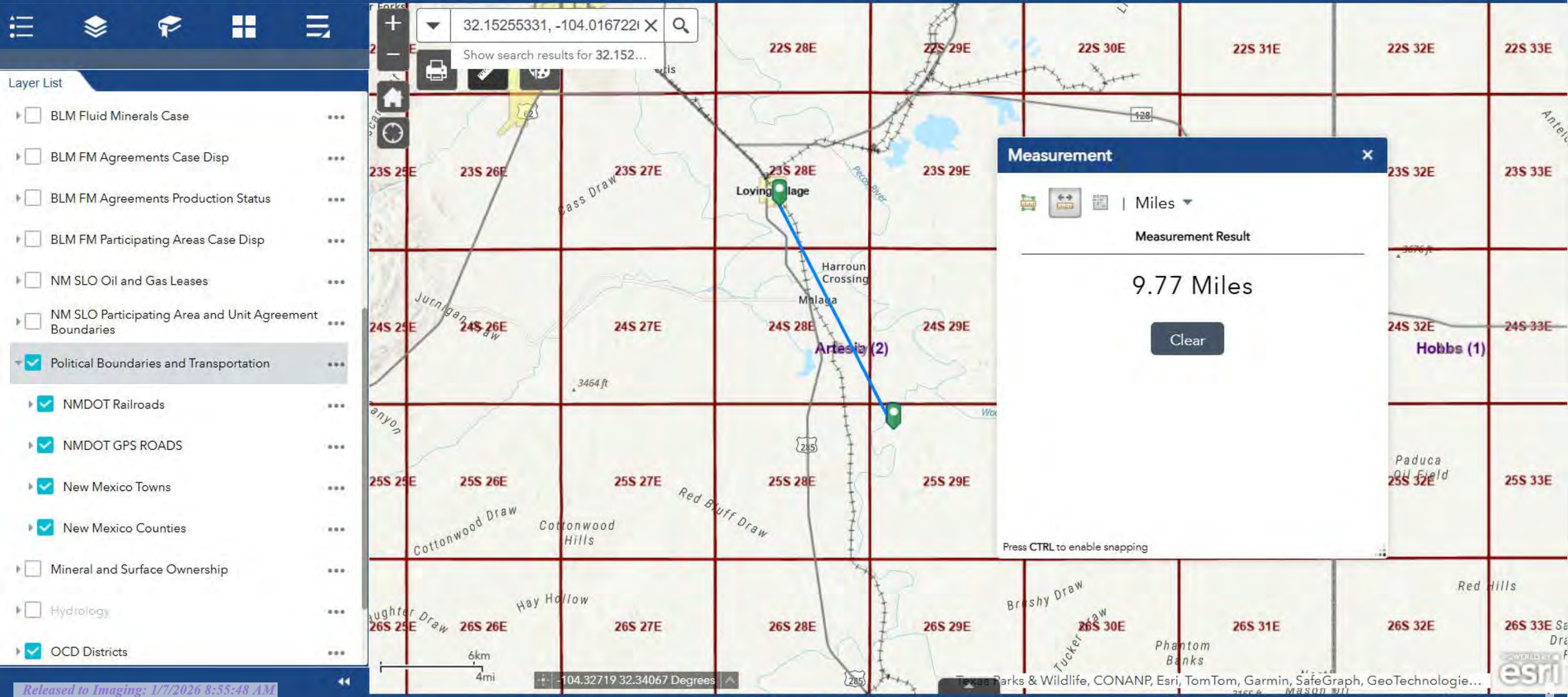


05. 3.22mi to a Spring from Corral Canyon Fed Com 1H

NM OCD Oil and Gas MAP

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map



U.S. Fish and Wildlife Service
National Wetlands Inventory

07. 0.38mi from a Wetland

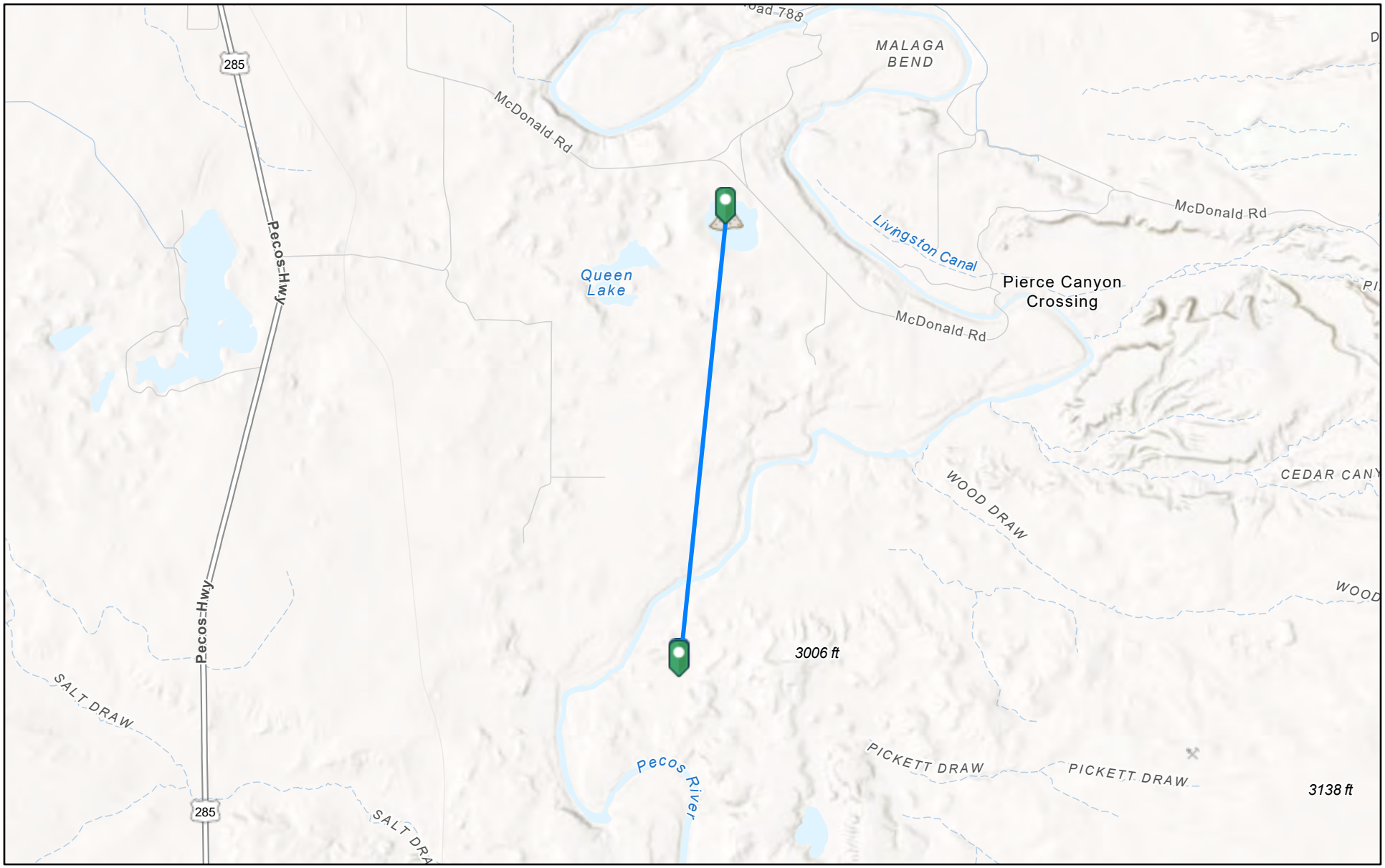
October 6, 2025

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.

08. 3.18mi to a Mine from Corral Canyon Fed Com 1H



10/6/2025, 3:29:56 PM

Registered Mines

Salt

Aggregate, Stone etc.

1:72,224

0 0.5 1 2 mi

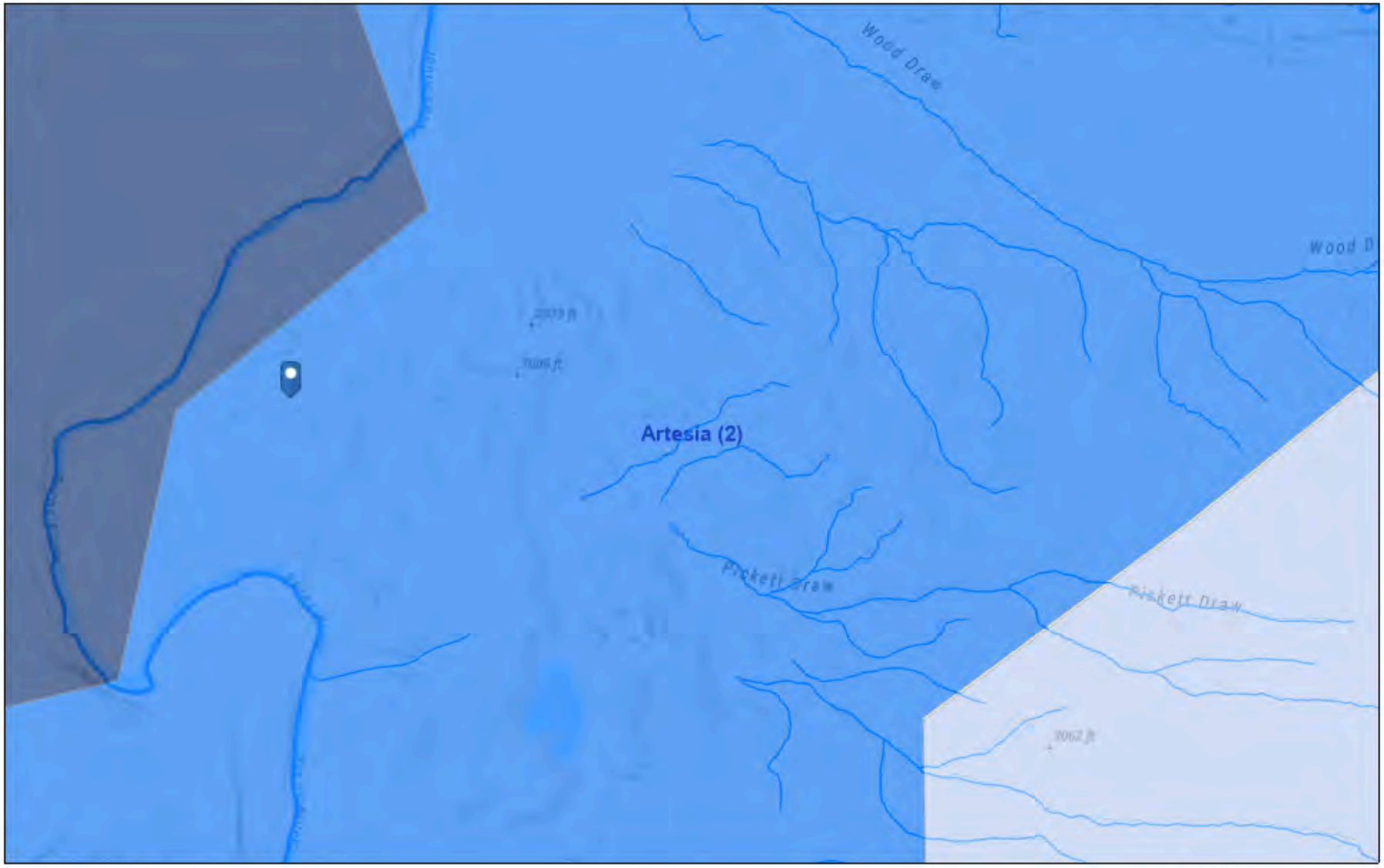
0 0.75 1.5 3 km

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)

09. Corral Canyon Fed Com 1 Located in Medium Karst



National Flood Hazard Layer FIRMette

FEMA

104°1'19"W 32°9'24"N

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

1:6,000

104°0'42"W 32°8'54"N

Basemap Imagery Source: USGS National Map 2023

Legend

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

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 Cross Sections with 1% Annual Chance
  - 17.5 Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/7/2025 at 9:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

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 Eddy Area, New Mexico

October 7, 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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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 21, 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: Nov 12, 2022—Dec 2, 2022

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
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	4.5	100.0%
Totals for Area of Interest		**4.5**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

Eddy Area, New Mexico

PD—Pajarito-Dune land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w55
Elevation: 3,000 to 5,000 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

Pajarito and similar soils: 46 percent
Dune land: 45 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pajarito

Setting

Landform: Dunes, interdunes, plains
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 36 inches: fine sandy loam
H3 - 36 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dune fields
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 6 inches: sandy loam
H2 - 6 to 60 inches: sandy loam

Interpretive groups

Land capability classification (irrigated): None specified
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent
Hydric soil rating: No

Largo

Percent of map unit: 4 percent
Ecological site: R070BC007NM - Loamy
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

- R070BD003NM
- Not rated or not available

Soil Rating Lines

- R070BD003NM
- Not rated or not available

Soil Rating Points

- R070BD003NM
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 21, 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: Nov 12, 2022—Dec 2, 2022

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
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	Pajarito (46%)	R070BD003NM — Loamy Sand	4.5	100.0%
		Dune land (45%)	R070BD003NM — Loamy Sand		
		Rock outcrop (5%)			
		Largo (4%)	R070BC007NM — Loamy		
Totals for Area of Interest				**4.5**	**100.0%**

References

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

USDA Natural Resources Conservation Service

Ecological site R070BD003NM
Loamy Sand

Accessed: 12/08/2025

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.

Associated sites

R070BD004NM	**Sandy** Sandy
R070BD005NM	**Deep Sand** Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

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

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

Table 2. Representative physiographic features

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

Climatic features

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

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

Table 3. Representative climatic features

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

Influencing water features

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

Soil features

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

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

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

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

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

Characteristic soils are:
Maljamar
Berino
Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid
Soil depth	40–72 in
Surface fragment cover <=3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	5–7 in
Calcium carbonate equivalent (0-40in)	3–40%
Electrical conductivity (0-40in)	2–4 mmhos/cm

Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

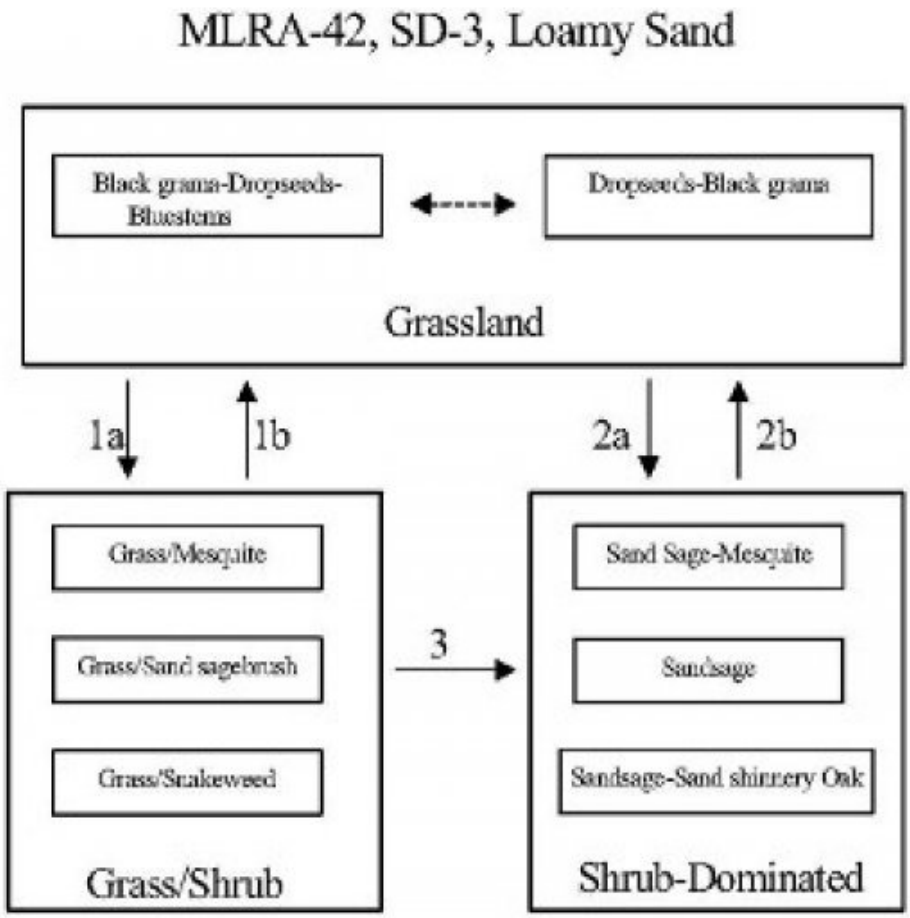
Overview

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

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

State and transition model

Plant Communities and Transitional Pathways (diagram):



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

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

3. Continued loss of grass cover, erosion.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

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

Table 5. Annual production by plant type

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

Table 6. Ground cover

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

Figure 5. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

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

State 2
Grass/Shrub

Community 2.1
Grass/Shrub

Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed

to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971). Diagnosis: This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution. Transition to Grass/Shrub State (1a): The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984). Key indicators of approach to transition: • Loss of black grama cover • Surface soil erosion • Bare patch expansion • Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances Transition to Historic Plant Community (1b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state. Key indicators of approach to transition: • Severe loss of grass species cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite abundance Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state. Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite. Key indicators of approach to transition: • Continual loss of dropseeds/threeawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threeawn

and mesquite/snakeweed abundance

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1	**Warm Season**			61–123	
	little bluestem	SCSC	*Schizachyrium scoparium*	61–123	–
2	**Warm Season**			37–61	
	sand bluestem	ANHA	*Andropogon hallii*	37–61	–
3	**Warm Season**			37–61	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	37–61	–
	silver bluestem	BOSA	*Bothriochloa saccharoides*	37–61	–
4	**Warm Season**			123–184	
	black grama	BOER4	*Bouteloua eriopoda*	123–184	–
	bush muhly	MUPO2	*Muhlenbergia porteri*	123–184	–
5	**Warm Season**			123–184	
	thin paspalum	PASE5	*Paspalum setaceum*	123–184	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	123–184	–
	fringed signalgrass	URCI	*Urochloa ciliatissima*	123–184	–
6	**Warm Season**			123–184	
	spike dropseed	SPCO4	*Sporobolus contractus*	123–184	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	123–184	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	123–184	–
7	**Warm Season**			61–123	
	hooded windmill grass	CHCU2	*Chloris cucullata*	61–123	–
	Arizona cottontop	DICA8	*Digitaria californica*	61–123	–
9	**Other Perennial Grasses**			37–61	
	Grass, perennial	2GP	*Grass, perennial*	37–61	–
Shrub/Vine					
8	**Warm Season**			37–61	
	New Mexico feathergrass	HENE5	*Hesperostipa*	37–61	–

			neomexicana		
	giant dropseed	SPGI	*Sporobolus giganteus*	37–61	–
10	**Shrub**			61–123	
	sand sagebrush	ARFI2	*Artemisia filifolia*	61–123	–
	Havard oak	QUHA3	*Quercus havardii*	61–123	–
11	**Shrub**			34–61	
	fourwing saltbush	ATCA2	*Atriplex canescens*	37–61	–
	featherplume	DAFO	*Dalea formosa*	37–61	–
12	**Shrub**			37–61	
	jointfir	EPHED	*Ephedra*	37–61	–
	littleleaf ratany	KRER	*Krameria erecta*	37–61	–
13	**Other Shrubs**			37–61	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	37–61	–
Forb					
14	**Forb**			61–123	
	leatherweed	CRPOP	*Croton pottsii var. pottsii*	61–123	–
	Indian blanket	GAPU	*Gaillardia pulchella*	61–123	–
	globemallow	SPHAE	*Sphaeralcea*	61–123	–
15	**Forb**			12–37	
	woolly groundsel	PACA15	*Packera cana*	12–37	–
16	**Forb**			61–123	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	61–123	–
	woolly plantain	PLPA2	*Plantago patagonica*	61–123	–
17	**Other Forbs**			37–61	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	37–61	–

Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.

Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

Hydrological functions

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

Recreational uses

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

Wood products

This site has no potential for wood products.

Other products

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

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index Ac/AUM
100 - 76 2.3 – 3.5
75 – 51 3.0 – 4.5

50 – 26 4.6 – 9.0
25 – 0 9.1 +

Inventory data references

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

Other references

Literature Cited:

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

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

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

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

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

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

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

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

Contributors

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Quinn Hodgson

Rangeland health reference sheet

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

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

Indicators

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

   _____

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:**

13 - Corral Canyon Fed Com 1H - Pr, Rustler

12/8/2025

1:94,036

World_Boundaries_and_Places

State Geologic Map Compilation – Geology

Sedimentary, undifferentiated

Unconsolidated, undifferentiated

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

19m Resolution Metadata

0 0.5 1 2 mi

0 1 2 4 km

Esri, HERE, Garmin, Earthstar Geographics

APPENDIX B – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	9/26/2025		

Summary of Times	
Arrived at Site	9/26/2025 9:15 AM
Departed Site	9/26/2025 10:36 AM

Daily Site Visit Report

Field Notes

9:48 Completed saftey paperwork upon arrival and received work authorization

9:58 811 corners were marked

9:59 The stained area was marked as an area of interest on internal maps. This polygon will be replaced by the delineation confirmed release area in report figures.

9:59 Photographs of the initial staining are in this report

10:36 811 was placed on location. Ticket number: 25SE260236

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Southwest

Northeast corner of the 811

Viewing Direction: Southeast

Northwest corner of the 811

Viewing Direction: Northeast

Southwest corner of the 811

Viewing Direction: Northwest

Southeast corner of the 811

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: South
	
Stained area	Center of the stained area
Viewing Direction: South	**Viewing Direction**: Southeast
	
Northwestern most area of the stained area	Release point

Daily Site Visit Report

Viewing Direction: Northeast

The area south of the release point does not appear to have saturated staining

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Katrina Taylor

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	10/1/2025		

Summary of Times	
Arrived at Site	10/1/2025 10:38 AM
Departed Site	10/1/2025 4:16 PM

Daily Site Visit Report

Field Notes

10:38 Received work authorization before starting work.

10:38 Each borehole was checked with a pin finder

16:01 Every borehole hit refusal at 1ft

16:02 BH25-01, BH25-02, BH25-03, BH25-04, and BH25-05 were taken

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: North

BH25-01 0/1 was taken as a southern delineated point

Viewing Direction: West

BH25-02 0/1 was taken as a eastern delineated point

Viewing Direction: South

BH25-03 0/1 was taken as a northern delineated point

Viewing Direction: East

BH25-04?0/1 was taken as a western delineated point

Daily Site Visit Report

Viewing Direction: Southwest

BH25-04?0/0.5/1 was taken as a vertical delineated point

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Katrina Taylor

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	10/16/2025		

Summary of Times	
Arrived at Site	10/16/2025 8:00 AM
Departed Site	10/16/2025 2:30 PM

Daily Site Visit Report

Field Notes

8:18 Travel to site/ safety paperwork

8:19 Corners of remediation area marked in paint

8:19 Windows for Hydrovac marked in paint

11:44 Hydrovac began windowing lines

11:44 Washout station built for Hydrovac

Next Steps & Recommendations

1 Complete Hydrovacing

2 Complete excavation

3 Confirmation sampling

4 Haul contaminated material to disposal

5 Reporting/ backfill

Daily Site Visit Report

Site Photos

Viewing Direction: North

Excavation marked

Viewing Direction: Northwest

Hydrovacing around production equipment and lines

Viewing Direction: South

Building washout station for Hydrovac

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	10/21/2025		

Summary of Times	
Arrived at Site	10/21/2025 9:30 AM
Departed Site	10/21/2025 3:30 PM

Daily Site Visit Report

Field Notes

10:12 Travel to site/ safety paperwork

10:12 Contaminated material was hauled to disposal

10:12 Excavation continued

14:15 Confirmation samples were collected and field screened

14:40 Samples were jarred and labeled

14:40 Coc's were created

Next Steps & Recommendations

1 Send samples to lab for further analysis

2 Report writing

3 Backfill

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: North
	
Contaminated material hauled to disposal	Excavation continues
Viewing Direction: West	**Viewing Direction**: North
	
BS25-04 @ 1’ 5 point confirmation sample	BS25-07 @ 1’ 5 point confirmation sample

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: East
	
BS25-10 @ 1’ 5 point confirmation sample	BS25-13 @ 1’ 5 point confirmation sample

Viewing Direction: North	**Viewing Direction**: Northeast
	
BS25-08 @ 1’ BS25-11 @ 1’ BS25-14 @ 1’ 5 point confirmation samples	BS25-12 @ 1’ BS25-09 @ 1’

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: West
	
BS25-05 @ 1’ BS25-06 @ 1’	BS25-01 @ 1’

Viewing Direction: South	**Viewing Direction**: East
	
BS25-02 @ 1’	BS25-03 @ 1’

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: Northeast
	
WS25-01 @ 0-1’	WS25-02 @ 0-1’

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature: 
Signature

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	10/27/2025		

Summary of Times	
Arrived at Site	10/27/2025 12:00 PM
Departed Site	10/27/2025 2:00 PM

Daily Site Visit Report

Field Notes

11:56 Travel to site / safety paperwork

11:56 Confirmation sample BS25-14 @ 1’

13:24 Field screen sample

13:24 Jar sample

13:24 Coc created

13:24 Travel to backfill stockpile and collect sample

Next Steps & Recommendations

1 Send sample to lab for further analysis

2 Report writing

3 Backfill excavation

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: North
	
BS25-14 @ 1’ 5 point composite sample	BACKFILL SAMPLE

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	11/3/2025		

Summary of Times	
Arrived at Site	11/3/2025 8:45 AM
Departed Site	11/3/2025 1:00 PM

Daily Site Visit Report

Field Notes

9:08 Travel to site/ safety paperwork

9:09 BS25-05, BS25-07, and BS25-08 were sampled at 1’

11:39 Samples were field screened

11:39 Samples were jarred and labeled

13:51 Coc’s created

Next Steps & Recommendations

1 Send samples to lab for further analysis

2 Report writing

3 Backfill excavation

Daily Site Visit Report

Site Photos

Viewing Direction: South

BS25-05 @ 1’

Viewing Direction: West

BS25-07 @ 1’

Viewing Direction: North

BS25-08 @ 1’

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature:

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Incident ID #:	nAPP2526632539
Site Location Name:	Corral Canyon Federal Com #001H	API #:	
Inspection Date:	11/20/2025		

Summary of Times	
Arrived at Site	11/20/2025 9:00 AM
Departed Site	11/20/2025 11:00 AM

Daily Site Visit Report

Field Notes

9:50 Travel to site/ safety paperwork

9:50 5 point composite sample 1' 1" around BS25-08 and collected

9:51 Composite Sample was collected from point

9:51 Sample was field screened

9:51 Sample was jarred and labeled

9:51 COC created

Next Steps & Recommendations

1 Send sample to lab for further analysis

2 Report/ backfill

Daily Site Visit Report

Site Photos

Viewing Direction: North

BS25-08 @ 1.1’

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Riley Arnold

Signature: 

APPENDIX C – Laboratory Data Reports and Chain of Custody Forms

CARDINAL Laboratories

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

October 08, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: CORRAL CANYON FED COM 1H

Enclosed are the results of analyses for samples received by the laboratory on 10/02/25 14:10.

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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 01 0 (H256155-01)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.6 %* *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	**432**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *74.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *69.8 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 01 1 (H256155-02)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	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	**560**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

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

Surrogate: 1-Chlorooctadecane *77.2 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 02 0 (H256155-03)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *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	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

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

Surrogate: 1-Chlorooctadecane *78.0 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 02 1 (H256155-04)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	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	**288**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *83.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *78.1 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 03 0 (H256155-05)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.3 %* *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	**432**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *80.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *75.0 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 03 1 (H256155-06)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	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	**768**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *84.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *79.1 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 04 0 (H256155-07)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *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	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *76.7 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *71.1 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 04 1 (H256155-08)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	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	**528**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *84.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *78.1 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 05 0.5 (H256155-09)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *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	**3120**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	**737**	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	**157**	10.0	10/03/2025	ND					

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

Surrogate: 1-Chlorooctadecane *100 %* *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:	10/02/2025	Sampling Date:	10/01/2025
Reported:	10/08/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BH 25 - 05 1 (H256155-10)

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	10/02/2025	ND	2.15	107	2.00	24.4	
Toluene*	<0.050	0.050	10/02/2025	ND	1.98	98.8	2.00	20.6	
Ethylbenzene*	<0.050	0.050	10/02/2025	ND	1.97	98.7	2.00	15.5	
Total Xylenes*	<0.150	0.150	10/02/2025	ND	5.97	99.5	6.00	14.8	
Total BTEX	<0.300	0.300	10/02/2025	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	**432**	16.0	10/03/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/03/2025	ND	216	108	200	2.17	
DRO >C10-C28*	**36.8**	10.0	10/03/2025	ND	218	109	200	0.855	
EXT DRO >C28-C36	<10.0	10.0	10/03/2025	ND					

Surrogate: 1-Chlorooctane *93.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *90.0 %* *39.9-141*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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

Company Name:	VERTEX RESOURCE
Project Manager:	CHAD HENSLEY
Address:	3101 BOYD DR
City:	CARLSBAD State: NM Zip: 88220
Phone #:	Fax #:
Project #:	25A-05224 Project Owner:
Project Name:	Corral Canyon FED COM 1H
Project Location:	
Sampler Name:	KATRINA TAYLOR

BILL TO

P.O. #:	
Company:	EXXON MOBIL
Attn:	DALE WOODALL
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

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	CHLORIDE	MRO, DRO, GRO	BTEX
H256155																		
1	BH25-01	0	G	1			X							10/1/25	11:00	X	X	X
2	BH25-01	1													11:30			
3	BH25-02	0													12:00			
4	BH25-02	1													12:30			
5	BH25-03	0													15:00			
6	BH25-03	1													13:30			
7	BH25-04	0													14:00			
8	BH25-04	1													14:30			
9	BH25-05	0.5													15:00			
10	BH25-05	1													15:30			

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:	Katrina Taylor	Date: 10/2	Received By:
		Time: 1410	
Relinquished By:		Date:	Received By:
		Time:	

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

REMARKS: PLEASE PUT ON ITS OWN REPORT
WO: 1141221001 • ID: NAPP2526632539
GFCM: 48605000

Turnaround Time: Standard ☒ Rush ☐ Bacteria (only) Sample Condition Cool Intact Observed Temp. °C

Thermometer ID #113 #140 Yes Yes
Correction Factor -0.5°C +0.3°C No No Corrected Temp. °C

Delivered By: (Circle One) Observed Temp. °C 1.4 2
Sampler - UPS - Bus - Other: Corrected Temp. °C 1.7

Sample Condition: Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No

CHECKED BY: (Initials) TO

10/2/25

† 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

October 29, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: CORRAL CANYON FED COM 1H

Enclosed are the results of analyses for samples received by the laboratory on 10/23/25 13:15.

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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 01 @ 1' (H256685-01)

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	10/25/2025	ND	1.49	74.6	2.00	11.6	
Toluene*	<0.050	0.050	10/25/2025	ND	1.67	83.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.61	80.3	2.00	9.66	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	4.73	78.8	6.00	9.37	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *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	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *85.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *76.6 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 02 @ 1' (H256685-02)

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	10/25/2025	ND	1.49	74.6	2.00	11.6	
Toluene*	<0.050	0.050	10/25/2025	ND	1.67	83.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.61	80.3	2.00	9.66	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	4.73	78.8	6.00	9.37	
Total BTEX	<0.300	0.300	10/25/2025	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	**208**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

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

Surrogate: 1-Chlorooctadecane *75.6 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 03 @ 1' (H256685-03)

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	10/25/2025	ND	1.49	74.6	2.00	11.6	
Toluene*	<0.050	0.050	10/25/2025	ND	1.67	83.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.61	80.3	2.00	9.66	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	4.73	78.8	6.00	9.37	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *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	**512**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *85.7 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *78.2 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 04 @ 1' (H256685-04)

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	10/25/2025	ND	1.49	74.6	2.00	11.6	
Toluene*	<0.050	0.050	10/25/2025	ND	1.67	83.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.61	80.3	2.00	9.66	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	4.73	78.8	6.00	9.37	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *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	**288**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**25.1**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *95.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *86.9 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 05 @ 1' (H256685-05)

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	10/25/2025	ND	1.49	74.6	2.00	11.6	
Toluene*	<0.050	0.050	10/25/2025	ND	1.67	83.4	2.00	10.2	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.61	80.3	2.00	9.66	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	4.73	78.8	6.00	9.37	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *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	**432**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**107**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	**28.0**	10.0	10/24/2025	ND					

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

Surrogate: 1-Chlorooctadecane *85.9 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 06 @ 1' (H256685-06)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *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	**400**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

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

Surrogate: 1-Chlorooctadecane *75.9 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 07 @ 1' (H256685-07)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *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	**272**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**92.4**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	**25.3**	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *92.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *86.4 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 08 @ 1' (H256685-08)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *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	**432**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**98.3**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	**27.4**	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *86.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *81.3 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 09 @ 1' (H256685-09)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *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	**384**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**34.8**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *89.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *83.1 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 10 @ 1' (H256685-10)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *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	**224**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *76.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *69.8 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 11 @ 1' (H256685-11)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *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	**304**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**35.2**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *72.6 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *66.8 %* *39.9-141*

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Analytical Results For:

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

Received:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 12 @ 1' (H256685-12)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *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	**336**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**60.9**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	**16.6**	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *74.7 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *74.4 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 13 @ 1' (H256685-13)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *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	**368**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	**13.8**	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *79.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *72.4 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 01 @ 0-1' (H256685-14)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *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	**432**	16.0	10/24/2025	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

Surrogate: 1-Chlorooctane *86.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *79.4 %* *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:	10/23/2025	Sampling Date:	10/21/2025
Reported:	10/29/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: WS25 - 02 @ 0-1' (H256685-15)

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	10/25/2025	ND	1.78	89.1	2.00	5.64	
Toluene*	<0.050	0.050	10/25/2025	ND	1.70	85.1	2.00	8.26	
Ethylbenzene*	<0.050	0.050	10/25/2025	ND	1.84	91.9	2.00	6.06	
Total Xylenes*	<0.150	0.150	10/25/2025	ND	5.83	97.2	6.00	5.17	
Total BTEX	<0.300	0.300	10/25/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *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	**400**	16.0	10/27/2025	ND	432	108	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	10/24/2025	ND	212	106	200	0.533	
DRO >C10-C28*	<10.0	10.0	10/24/2025	ND	196	98.1	200	1.03	
EXT DRO >C28-C36	<10.0	10.0	10/24/2025	ND					

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

Surrogate: 1-Chlorooctadecane *81.2 %* *39.9-141*

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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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-05224 Project Owner:
Project Name: Corral Canyon Federal Com #001H
Project Location:
Sampler Name: Riley Arnold

BILL TO
P.O. #: 1141221001
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
H256685-1	BS25-01 @ 1'	C	1			X					X		10.21.25	9:30	X	X	X
2	BS25-02 @ 1'													9:45			
3	BS25-03 @ 1'													9:56			
4	BS25-04 @ 1'													10:07			
5	BS25-05 @ 1'													10:20			
6	BS25-06 @ 1'													10:46			
7	BS25-07 @ 1'													10:57			
8	BS25-08 @ 1'													11:14			
9	BS25-09 @ 1'													11:28			
10	BS25-10 @ 1'													11:40			

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 consequental 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.

04024011K-all

Relinquished By: Date: 10-23-25 Time: 1315 Received By: Tamara Oldaker
Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address: rarnold@vertexresource.com
chensley@vertexresource.com
REMARKS:
GFLM: 48605009

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 4.9 Corrected Temp. °C 5.2
Sample Condition Cool ☑ Yes Intact ☑ Yes ☐ No ☐ No
CHECKED BY: (Initials) TO
Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #140 Correction Factor -0.6°C +0.3°
Bacteria (only) Sample Condition Cool ☐ Yes Intact ☐ Yes ☐ No ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.5 08/05/24

† 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-05224 Project Owner:
Project Name:	Corral canyon Federal com #001H
Project Location:	
Sampler Name:	Riley Arnold

BILL TO

P.O. #:	1141221001
Company:	ExxonMobil
Attn:	Dale Woodall
Address:	3104 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
H256685																	
11	BS25-11 @ 1'	C	1			X					X		10.23.25	11:56	X	X	X
12	BS25-12 @ 1'													12:15			
13	BS25-13 @ 1'													12:27			
	~~BS25-14 @ 1'~~													12:42			
14	WS25-01 @ 0-1'													1:36			
15	WS25-02 @ 0-1'													1:40			

NO Sample in JAR @ 10.23.25

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 consequental 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.

04024011 - all

Relinquished By:	Date: 10.23.25	Received By:	
	Time: 1315		
Relinquished By:	Date:	Received By:	
	Time:		

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

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

REMARKS:

CFCM: 48605000

Delivered By: (Circle One)	Observed Temp. °C 4.9	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 5.2		

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #140
Correction Factor -0.6°C +0.3°

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

FORM-006 R 3.3 08/05/24

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: CORRAL CANYON FED COM 1H

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:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 14 @ 1' (H256778-01)

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 *99.6 %* *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	**416**	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 *55.8 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *53.2 %* *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:	10/28/2025	Sampling Date:	10/27/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BACKFILL (H256778-02)

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 *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	**128**	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 *73.0 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *70.9 %* *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

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-05224 Project Owner:
Project Name: Corral Canyon Federal COM #001H
Project Location:
Sampler Name: Riley Arnold

BILL TO
P.O. #: 1141221001
Company: ExxonMobil
Attn: Dale Woodall
Address: 3101 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
H256778																	
1	BS25-14 @ 1'	C	1			X					X		10.27.25	12:00	X	X	X
2	Backfill	C	1			X					X		10.27.25	12:15	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.

Relinquished By: Date: 10.28.25 Time: 1400 Received By:
Relinquished By: Date: Time: Received By:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 24 Corrected Temp. °C 27
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: chensley@vertexresource.com Rarnold@vertexresource.com
REMARKS: GFCM: 48605000
Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #140 Correction Factor -0.6°C +0.3°
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

FORM-006 R 3.3 08/08/24

CARDINAL Laboratories

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

November 10, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: CORRAL CANYON FED COM 1H

Enclosed are the results of analyses for samples received by the laboratory on 11/04/25 12:45.

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:	11/04/2025	Sampling Date:	11/03/2025
Reported:	11/10/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 05 @ 1' (H256943-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2025	ND	1.70	85.0	2.00	8.34	
Toluene*	<0.050	0.050	11/05/2025	ND	1.90	94.8	2.00	6.76	
Ethylbenzene*	<0.050	0.050	11/05/2025	ND	1.84	91.9	2.00	7.51	
Total Xylenes*	<0.150	0.150	11/05/2025	ND	5.52	92.0	6.00	7.20	
Total BTEX	<0.300	0.300	11/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *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	**592**	16.0	11/05/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2025	ND	200	100	200	0.372	
DRO >C10-C28*	**16.2**	10.0	11/05/2025	ND	205	102	200	0.0939	
EXT DRO >C28-C36	<10.0	10.0	11/05/2025	ND					

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

Surrogate: 1-Chlorooctadecane *82.0 %* *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:	11/04/2025	Sampling Date:	11/03/2025
Reported:	11/10/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 07 @ 1' (H256943-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2025	ND	1.70	85.0	2.00	8.34	
Toluene*	<0.050	0.050	11/05/2025	ND	1.90	94.8	2.00	6.76	
Ethylbenzene*	<0.050	0.050	11/05/2025	ND	1.84	91.9	2.00	7.51	
Total Xylenes*	<0.150	0.150	11/05/2025	ND	5.52	92.0	6.00	7.20	
Total BTEX	<0.300	0.300	11/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *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	**592**	16.0	11/05/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2025	ND	200	100	200	0.372	
DRO >C10-C28*	**22.9**	10.0	11/05/2025	ND	205	102	200	0.0939	
EXT DRO >C28-C36	<10.0	10.0	11/05/2025	ND					

Surrogate: 1-Chlorooctane *89.9 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *85.1 %* *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:	11/04/2025	Sampling Date:	11/03/2025
Reported:	11/10/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Tamara Oldaker
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 08 @ 1' (H256943-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2025	ND	1.70	85.0	2.00	8.34	
Toluene*	<0.050	0.050	11/05/2025	ND	1.90	94.8	2.00	6.76	
Ethylbenzene*	<0.050	0.050	11/05/2025	ND	1.84	91.9	2.00	7.51	
Total Xylenes*	<0.150	0.150	11/05/2025	ND	5.52	92.0	6.00	7.20	
Total BTEX	<0.300	0.300	11/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *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	**640**	16.0	11/05/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2025	ND	200	100	200	0.372	
DRO >C10-C28*	**58.6**	10.0	11/05/2025	ND	205	102	200	0.0939	
EXT DRO >C28-C36	**16.1**	10.0	11/05/2025	ND					

Surrogate: 1-Chlorooctane *87.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *83.4 %* *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

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.
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.
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

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-05224 Project Owner:
Project Name:	Corral Canyon Federal COM
Project Location:	
Sampler Name:	Riley Arnold

BILL TO

P.O. #:	1141221001
Company:	ExxonMobil
Attn:	Dale Woodall
Address:	3104 E Greene St
City:	Carlsbad
State:	NM Zip: 88220
Phone #:	
Fax #:	

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
H256943																	
1	BS25-05 @ 1'	C	1			X					X		11.3.25	9:30	X	X	X
2	BS25-07 @ 1'													9:32			
3	BS25-08 @ 1'													9:40			

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 consequental 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.

040240 1K - aal

Relinquished By:	Date: 11-4-25	Received By:	
	Time: 1245		
Relinquished By:	Date:	Received By:	
	Time:		

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

Delivered By: (Circle One)	Observed Temp. °C 3.1	Sample Condition Cool ☑ Yes ☐ No	Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 3.4			

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #140
Correction Factor -0.6°C +0.3°C

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

FORM-006 R 3.3 08/05/24

† 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

December 02, 2025

CHAD HENSLEY

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: CORRAL CANYON FED COM 1H

Enclosed are the results of analyses for samples received by the laboratory on 11/24/25 11:00.

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:	11/24/2025	Sampling Date:	11/20/2025
Reported:	12/02/2025	Sampling Type:	Soil
Project Name:	CORRAL CANYON FED COM 1H	Sampling Condition:	Cool & Intact
Project Number:	25A - 05224	Sample Received By:	Alyssa Parras
Project Location:	EXXON MOBIL		

Sample ID: BS25 - 08 @ 1.1' (H257372-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/26/2025	ND	1.86	93.2	2.00	2.71	
Toluene*	<0.050	0.050	11/26/2025	ND	2.07	104	2.00	4.16	
Ethylbenzene*	<0.050	0.050	11/26/2025	ND	2.15	108	2.00	1.77	
Total Xylenes*	<0.150	0.150	11/26/2025	ND	6.67	111	6.00	1.53	
Total BTEX	<0.300	0.300	11/26/2025	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	**176**	16.0	11/25/2025	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2025	ND	197	98.6	200	4.36	
DRO >C10-C28*	<10.0	10.0	11/26/2025	ND	187	93.7	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	11/26/2025	ND					

Surrogate: 1-Chlorooctane *108 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *101 %* *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

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

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-05224 Project Owner:
Project Name:	Corral Canyon Fed com #001
Project Location:	
Sampler Name:	Riley Arnold

BILL TO

P.O. #:	1141221001
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
H257372-1	BS25-08 @ 1.1'	C	1			X					X		11.20.25	9:30	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 consequental 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: 11.24.25 Time: 1120	Received By:	
Relinquished By:	Date: Time:	Received By:	

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 #140 Correction Factor -0.6°C +0.3

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.5 Corrected Temp. °C 4.8	Sample Condition Cool: Yes ☑ No ☐ Intact: Yes ☑ No ☐	CHECKED BY: (Initials)	Bacteria (only) Sample Condition Cool: Yes ☐ No ☐ Intact: Yes ☐ No ☐ Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.5 08/05/24

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

APPENDIX D – Notifications

From: Chad Hensley
To: Steph McCarty
Cc: Riley Arnold
Subject: FW: (Variance Approval) - Corral Canyon Fed Com #001H
Date: Thursday, December 11, 2025 1:49:58 PM

From: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Sent: Thursday, December 11, 2025 1:40 PM
To: Chad Hensley <CHensley@vertexresource.com>; Riley Arnold <RArnold@vertexresource.com>
Subject: (Variance Approval) - Corral Canyon Fed Com #001H

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Chad and Riley,

Please send all future variance request to the Enviro email box so that the correct reviewer is sent the request.

A sampling notification was mistakenly placed on Corral Canyon 15 CVB nAPP2519250010 for 600sq/ft a total of 3 samples on 10/29/2025. This sampling notification was intended to be placed on Corral Canyon Fed Com #001H nAPP2526632539. Please make sure a properly dated C-141N is filled out for the Corral Canyon Fed Com #001H nAPP2526632539 incident if not completed yet. The variance is approved.

A sampling notification was placed on Corral Canyon Fed Com #001H for 200sq/ft 1 Sample to be collected. Vertex mistakenly collected this sample on 11/20/2025 and not 11/21/2025. A variance is approved for not allowing a 2-business day notification to occur.

Please, ensure the correct date/incident number are entered for each C-141N sampling notification in the future.

Robert Hamlet • Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Chad Hensley <CHensley@vertexresource.com>
Sent: Thursday, December 11, 2025 12:22 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Riley Arnold <RArnold@vertexresource.com>
Subject: RE: [EXTERNAL] Corral Canyon Fed Com #001H

Yes.

What is the sampling surface area in square feet	600
What is the estimated number of samples that will be gathered	3
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/03/2025
Time sampling will commence	09:00 AM
Warning: Notification can not be less than two business days prior to conducting final sampling.	
Please provide any information necessary for observers to contact samplers	Riley Arnold 575-552-2953
Please provide any information necessary for navigation to sampling site	FRM INT GO N ON MARTINEZ RD 3.5MI, L TO LEASE RD 2.2MI, L ONTO LEASE RD .3MI, SLIGHT R ON LEASE RD .9MI, KEEP L 50FT TO LOC

From: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Sent: Thursday, December 11, 2025 11:49 AM
To: Riley Arnold <RArnold@vertexresource.com>
Cc: Chad Hensley <CHensley@vertexresource.com>
Subject: RE: [EXTERNAL] Corral Canyon Fed Com #001H

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Riley,

I don't see a sampling notification for **NAPP2519250010 CORRAL CANYON 15 CVB** for 11/3/2025? Was it the one on 10/29/2025?

Robert Hamlet • Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Riley Arnold <RArnold@vertexresource.com>
Sent: Thursday, December 11, 2025 9:53 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Chad Hensley <CHensley@vertexresource.com>
Subject: [EXTERNAL] Corral Canyon Fed Com #001H

> You don't often get email from rarnold@vertexresource.com. Learn why this is important

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

Rob,

Good morning,

I am emailing you regarding an ExxonMobil remediation sampling event. I am requesting a variance for the below line items.

1. Sampling notification 11/03/2025

- A sampling notification was placed on Corral Canyon 15 CVB nAPP2519250010 for 600sq/ft a total of 3 samples.
- This sampling notification was intended to be placed on Corral Canyon Fed Com #001H nAPP2526632539

2. Sampling notification 11/21/2025

- A sampling notification was placed on Corral Canyon Fed Com #001H for 200sq/ft 1 Sample to be collected
- Vertex made the mistake and collected this sample on 11/20/2025 and not 11/21/2025.

Riley Arnold
Environmental Technician
Vertex Resource Group Inc.
3101 Boyd Drive
Carlsbad, NM 88220

P 575-522-2953

www.vertex.ca

OCD Permitting

[NOTIFY] Notification Of Sampling (C-141N) Application

Submission Information

Submission ID:	521302	**Districts:**	Artesia
Operator:	[5380] XTO ENERGY, INC	**Counties:**	Eddy
Description:	XTO ENERGY, INC [5380] , CORRAL CANYON 15 CVB , nAPP2519250010		
Status:	Approved		
Status Date:	10/29/2025		
References (0):			

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	**nAPP2519250010**
Incident Name	**NAPP2519250010 CORRAL CANYON 15 CVB @ FAPP2403725789**
Incident Type	**Produced Water Release**
Incident Status	**Deferral Request Received**
Incident Facility	**[fAPP2403725789] CORRAL CANYON 15 CVB**

Location of Release Source

Site Name	**CORRAL CANYON 15 CVB**
Date Release Discovered	**07/10/2025**
Surface Owner	**Federal**

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	600
What is the estimated number of samples that will be gathered	3
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/03/2025
Time sampling will commence	09:00 AM

Warning: Notification can not be less than two business days prior to conducting final sampling.

Please provide any information necessary for observers to contact samplers	Riley Arnold 575-552-2953
Please provide any information necessary for navigation to sampling site	FRM INT GO N ON MARTINEZ RD 3.5MI, L TO LEASE RD 2.2MI, L ONTO LEASE RD .3MI, SLIGHT R ON L KEEP L 50FT TO LOC

Comments

No comments found for this submission.

Conditions

Summary:

chensley02 (10/29/2025), Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.

chensley02 (10/29/2025), If confirmation sampling is going to take place over multiple days, individual C-141N applications must be submitted for each sampling date. Date ranges are not currently accepted on the C-141N application.

Reasons

No reasons found for this submission.

Go Back

OCD Permitting

[NOTIFY] Notification Of Sampling (C-141N) Application

Submission Information

Submission ID:	527504	**Districts:**	Artesia
Operator:	[5380] XTO ENERGY, INC	**Counties:**	Eddy
Description:	XTO ENERGY, INC [5380] , CORRAL CANYON FEDERAL COM #001H , nAPP2526632539		
Status:	Approved		
Status Date:	11/18/2025		
References (0):			

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	**nAPP2526632539**
Incident Name	**NAPP2526632539 CORRAL CANYON FEDERAL COM #001H @ 30-015-43428**
Incident Type	**Produced Water Release**
Incident Status	**Initial C-141 Approved**
Incident Well	**[30-015-43428] CORRAL CANYON FEDERAL COM #001H**

Location of Release Source

Site Name	**CORRAL CANYON FEDERAL COM #001H**
Date Release Discovered	**09/22/2025**
Surface Owner	**Federal**

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	200
What is the estimated number of samples that will be gathered	1
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/21/2025
Time sampling will commence	09:00 AM
Warning: Notification can not be less than two business days prior to conducting final sampling.	
Please provide any information necessary for observers to contact samplers	Riley Arnold 575-552- 2953
Please provide any information necessary for navigation to sampling site	FRM INT GO N ON MARTINEZ RD 3.5MI, L TO LEASE RD 2.2MI, L ONTO LEASE RD .3MI, SLIGHT R ON L KEEP L 50FT TO LOC

Comments

No comments found for this submission.

Conditions

Summary:

chensley02 (11/18/2025), Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in th remediation closure samples not being accepted.

chensley02 (11/18/2025), If confirmation sampling is going to take place over multiple days, individual C-141N applications must be submitted for each sampling date. Date ranges are not currently accepted on the C-141N application.

Reasons

No reasons found for this submission.

Go Back

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

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 535734
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2526632539**
Incident Name	**NAPP2526632539 CORRAL CANYON FEDERAL COM #001H @ 30-015-43428**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-43428] CORRAL CANYON FEDERAL COM #001H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CORRAL CANYON FEDERAL COM #001H
Date Release Discovered	09/22/2025
Surface Owner	Federal

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: 6 BBL | Recovered: 2 BBL | Lost: 4 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Well | Produced Water | Released: 8 BBL | Recovered: 4 BBL | Lost: 4 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)	nipple on wellhead broke. well was shut in to stop the spill.

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 535734
	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: 12/17/2025

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Phone: (505) 476-3441

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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 (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 535734
	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 26 and 50 (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 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (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)	3120
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	894
GRO+DRO (EPA SW-846 Method 8015M)	737
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	10/16/2025
On what date will (or did) the final sampling or liner inspection occur	11/20/2025
On what date will (or was) the remediation complete(d)	11/20/2025
What is the estimated surface area (in square feet) that will be reclaimed	2755
What is the estimated volume (in cubic yards) that will be reclaimed	102
What is the estimated surface area (in square feet) that will be remediated	2755
What is the estimated volume (in cubic yards) that will be remediated	102
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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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 535734
	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: 12/17/2025
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: 535734
	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: 535734
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**527504**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**11/21/2025**
What was the (estimated) number of samples that were to be gathered	**1**
What was the sampling surface area in square feet	**200**

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	2755
What was the total volume (cubic yards) remediated	102
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	2755
What was the total volume (in cubic yards) reclaimed	102
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: 12/17/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 535734
	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

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 535734
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #nAPP2526632539 CORRAL CANYON FEDERAL COM #001H, thank you. This Remediation Closure Report is approved.	1/7/2026