ENSOLUM

February 13, 2026

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
James Ranch Unit DI 7 Battery
Incident Number nAPP2525557554
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document site assessment, delineation, excavation, and soil sampling activities at the James Ranch Unit DI 7 Battery (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to assess for the presence or absence of impacts to soil following, a release of crude oil. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing remedial activities that have occurred and requesting no further remediation for Incident Number nAPP2525557554.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit C (L3), Section 06, Township 23 South, Range 31 East, in Eddy County, New Mexico (32.337359°, -103.817970°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On September 10, 2025, a cow rubbed up against a ball valve handle which resulted in the release of approximately 6 barrels (bbls) of crude oil onto the surface of the pad. XTO immediately dispatched a vacuum truck, and approximately 2 bbls of fluids were recovered. XTO submitted a Notification of Release (NOR) and Initial C-141 Application (C-141) on September 12, 2025. The release was assigned Incident Number nAPP2525557554.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to determine the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented below.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest USGS 321946103492001 well that is approximately 0.5 miles southwest of the Site. Depth to water at this well was last measured on January 16, 2013, and measured 145 ft bgs. The total depth of the well measures 180 feet bgs. The Well Record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash located approximately 5,326 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole,

or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is potentially underlain by unstable geology. Per the New Mexico Oil and Gas Map, the Site is within medium potential karst designation area. Southwest Geophysical Consulting, a BLM-approved third-party cave/karst contractor, conducted a desktop survey, aerial survey, and geophysical survey of the Site. In summary, no surface karst features within the 200-foot survey area surrounding the release extent were identified in the desktop or surface karst surveys. Results of the geophysical study indicated a well-layered geologic system is present beneath the Site with no anomalies in the data that would be consistent with air-filled subsurface voids or a pathway to groundwater, confirming the absence of karst below the Site. A copy of the karst survey is included in Appendix B. Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On September 10, 2025, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the C-141 and visual observations. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. Photographic documentation was collected, and a photographic log is provided in Appendix C. Based on surficial staining of the release extent area, delineation and excavation activities were warranted.

On September 24, 2025, Ensolum personnel were at the Site to oversee delineation activities. Delineation potholes PH01 and PH02 were advanced via backhoe to 11 feet and 10 feet bgs, respectively. Both potholes were advanced within the release extent to assess the vertical extent of the release. Additionally, five delineation soil samples, SS01 through SS05, were collected outside the release extent to assess the lateral extent of the release. Soil from the delineation potholes and surface samples were field screened at depths ranging from the surface to 11 feet bgs for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix D. The delineation pothole locations and surface samples were mapped utilizing a handheld GPS unit and are depicted on Figure 2.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

Laboratory analytical results for delineation soil samples collected from pothole PH02 indicated TPH concentrations exceeded the Closure Criteria at depths ranging from 0.5 feet bgs to 2 feet bgs. Laboratory analytical results for soil samples PH01 at all depths, PH02 at a depth of 4 feet bgs, and SS01 through SS05 at ground surface, indicated all COC concentrations were compliant with the Closure Criteria and successfully defined the extent of the release. Based on visible staining in the release extent, elevated field screening results, and laboratory analytical results for the delineation soil samples, excavation activities were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES

Between October 29 to November 12, 2025, Ensolum personnel were at the Site to oversee excavation activities as indicated by visible staining, field screening activities, and laboratory analytical results from the delineation soil samples. Excavation activities were performed using a backhoe and transport vehicles to a maximum depth of 5 feet bgs. The excavation occurred on the well pad near the production equipment. To direct excavation activities, Ensolum personnel screened soil for VOCs and chloride as described above. Following the removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS04 were collected from the floor of the excavation at depths ranging from 0.5 feet to 5 feet bgs. Confirmation sidewall soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from ground surface to 5 feet bgs. The excavation extent and confirmation soil sample locations are presented on Figure 3. Photographic documentation is included in Appendix C.

The excavation soil samples were handled, transported, and analyzed as described above. The final excavation extent measured approximately 725 square feet. A total of approximately 94 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Halfway Disposal in Hobbs, New Mexico. After completion of confirmation sampling, the excavation area was backfilled with clean, like material.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all final confirmation soil samples indicated that all COC concentrations were compliant with the Closure Criteria and reclamation requirement, confirming the lateral and vertical extents of the release. Laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included as Appendix E.

CLOSURE REQUEST

Site assessment, delineation and excavation activities were conducted at the Site to address the September 10, 2025, release of crude oil. Laboratory analytical results for the final confirmation soil samples, collected from the final excavation extent, indicated that all COC concentrations were compliant with the Closure Criteria. Based on the soil sample analytical results, no further remediation was required. XTO backfilled the excavation with material purchased locally and recontoured to match pre-existing site conditions.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no sensitive receptors were identified at the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nAPP2525557554.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Tracy Hillard
Project Engineer

Tacoma Morrissey, P.G. (licensed in TX)
Associate Principal

cc: Robert Woodall, XTO
Richard Kotzur, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Confirmation Soil Sample Locations
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Appendix A	Referenced Well Records
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Appendix F	Spill Volume Calculation

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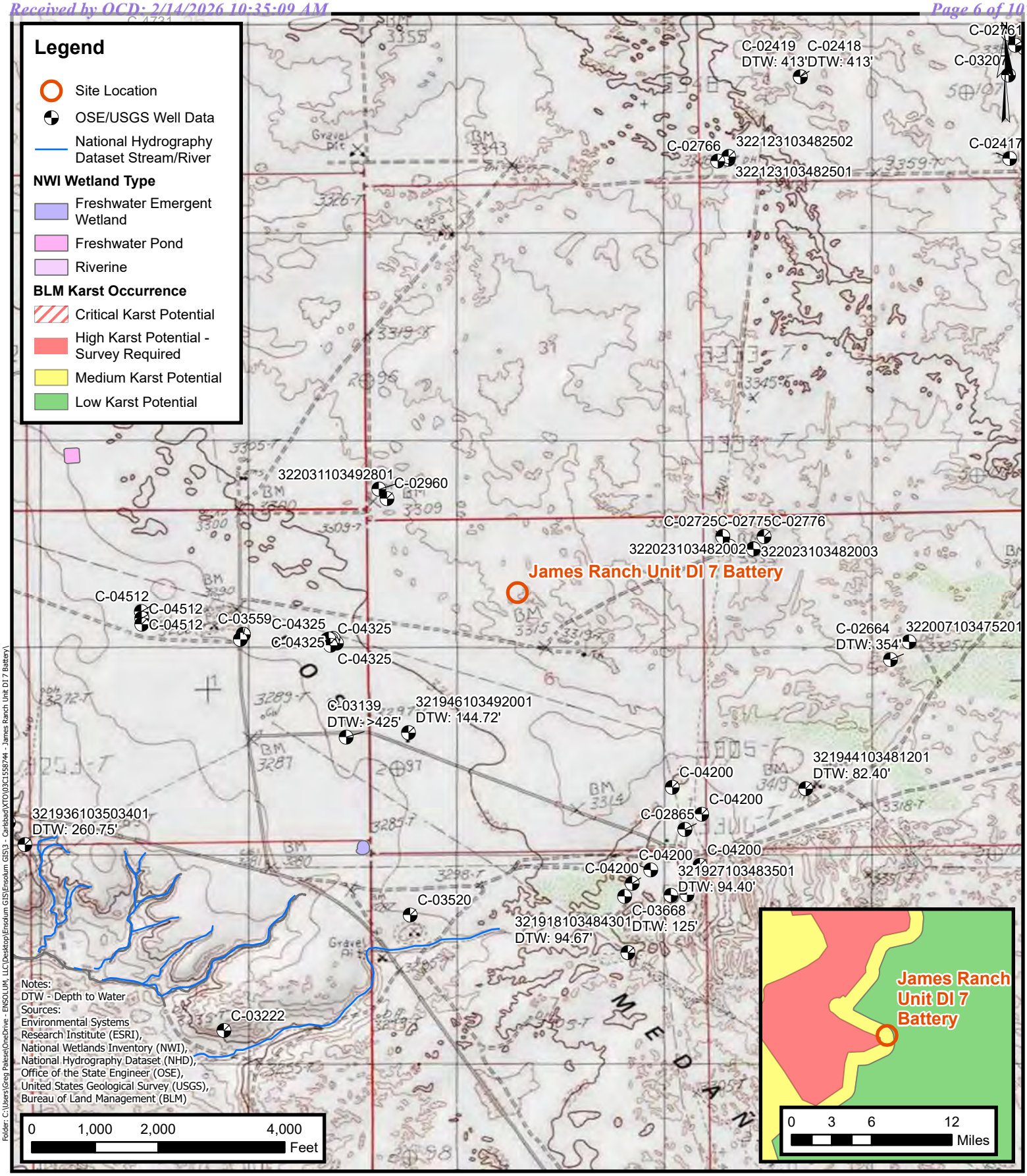
FIGURES



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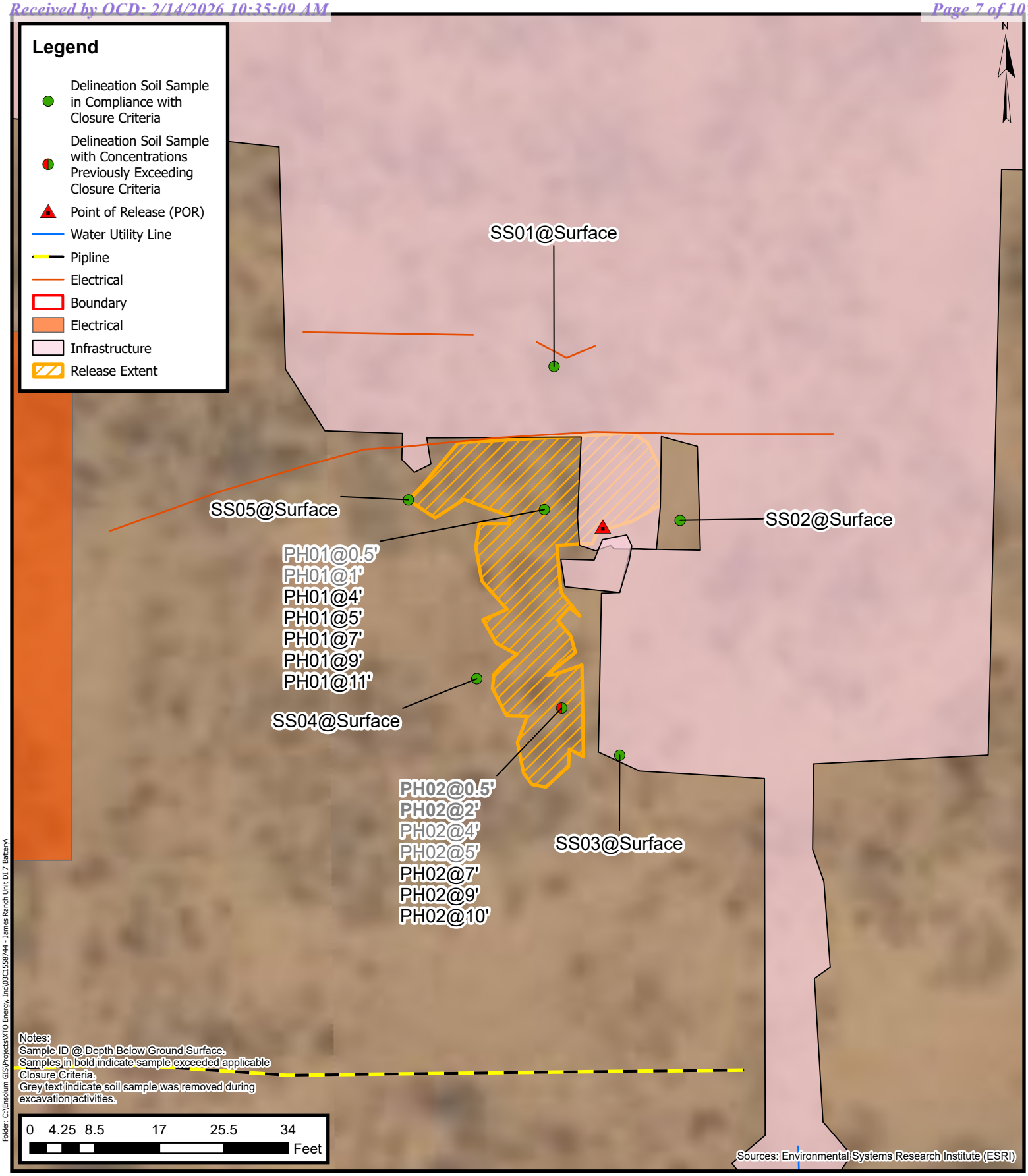
Site Receptor Map

XTO Energy, Inc
James Ranch Unit DI 7 Battery
Incident Number: nAPP2525557554
Unit C, Section 06, T 23S, R 31E
Eddy County, New Mexico

FIGURE 1



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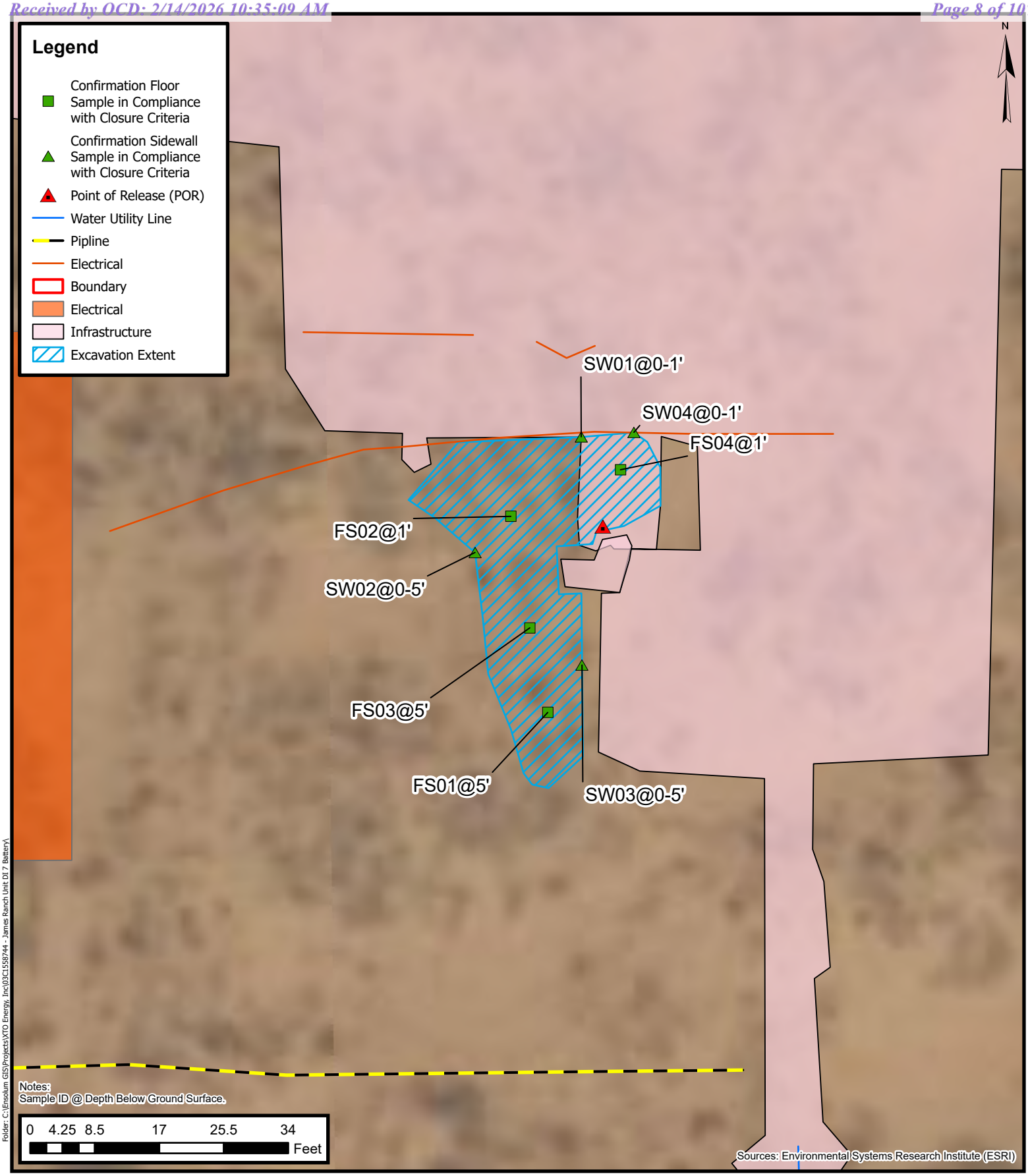
Delineation Soil Sample Locations

XTO Energy, Inc
James Ranch Unit DI 7 Battery
Incident Number: nAPP2525557554
Unit C, Sec 06, T 23S, R 31E
Eddy County, New Mexico

FIGURE 2



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Confirmation Soil Sample Locations

XTO Energy, Inc
James Ranch Unit DI 7 Battery
Incident Number: nAPP2525557554
Unit C, Section 06, T 23S, R 31E
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
James Ranch Unit DI 7 Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
~~PH01~~	~~09/24/2025~~	~~0.5~~	~~<0.050~~	~~0.622~~	~~16.6~~	~~210~~	~~26.5~~	~~227~~	~~253~~	~~80.0~~
~~PH01~~	~~09/24/2025~~	~~1~~	~~<0.050~~	~~0.381~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<16.0~~
PH01	09/24/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
PH01	09/24/2025	5	<0.050	0.336	<10.0	101	12.9	101	114	48.0
PH01	09/24/2025	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
PH01	09/24/2025	9	<0.050	5.31	118	686	87.9	804	892	64.0
PH01	09/24/2025	11	<0.050	<0.300	11.2	89.4	12.2	101	113	32.0
~~PH02~~	~~09/24/2025~~	~~0.5~~	~~8.00~~	~~**377**~~	~~6,120~~	~~11,200~~	~~1,540~~	~~17,320~~	~~**18,860**~~	~~288~~
~~PH02~~	~~09/24/2025~~	~~2~~	~~0.598~~	~~**60.3**~~	~~910~~	~~2,710~~	~~374~~	~~3,620~~	~~**3,994**~~	~~96.0~~
~~PH02~~	~~09/24/2025~~	~~4~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~79.5~~	~~18.6~~	~~79.5~~	~~98.1~~	~~32.0~~
~~PH02~~	~~09/24/2025~~	~~5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~30.9~~	~~<10.0~~	~~30.9~~	~~30.9~~	~~32.0~~
PH02	09/24/2025	7	<0.050	<0.300	<10.0	13.8	<10.0	13.8	13.8	16.0
PH02	09/24/2025	9	<0.050	<0.300	24.5	501	68.1	526	594	32.0
PH02	09/24/2025	10	<0.050	0.854	<10.0	138	17.5	138	156	16.0
SS01	09/24/2025	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
SS02	09/24/2025	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SS03	09/24/2025	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	464
SS04	09/24/2025	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	464
SS05	09/24/2025	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
James Ranch Unit DI 7 Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Confirmation Soil Samples										
FS01	10/30/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS02	10/29/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS03	10/30/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS04	11/12/2025	1	<0.050	<0.300	<10.0	28.4	<10.0	28.4	28.4	96.0
SW01	10/30/2025	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW02	10/30/2025	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW03	10/30/2025	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW04	11/12/2025	0-1	<0.050	<0.300	<10.0	30.9	<10.0	30.9	30.9	256

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during excavation activities

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APPENDIX A

Referenced Well Records

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.

Groundwater levels for the Nation

Ground water level pages will be decommissioned in early 2026. These gwlevel pages are frozen as of November 18th, 2025. Please find the modernized pages in WDFN that suit you best. Learn more about our modernization plans and timeline and new pages.

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321946103492001

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321946103492001 23S.31E.06.312333

Eddy County, New Mexico
Latitude 32°19'53.3", Longitude 103°49'24.8" NAD83
Land-surface elevation 3,305.00 feet above NGVD29
The depth of the well is 180 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1959-02-04		D	62610		3160.28	NGVD29	1	Z		
1959-02-04		D	62611		3161.92	NAVD88	1	Z		
1959-02-04		D	72019	144.72			1	Z		
2013-01-16	22:30 UTC	m	62610			NGVD29	D	S	USGS	
2013-01-16	22:30 UTC	m	62611			NAVD88	D	S	USGS	
2013-01-16	22:30 UTC	m	72019				D	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988

Section	Code	Description
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	D	Dry
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2026-01-14 15:42:00 EST
0.36 0.3 nadww01

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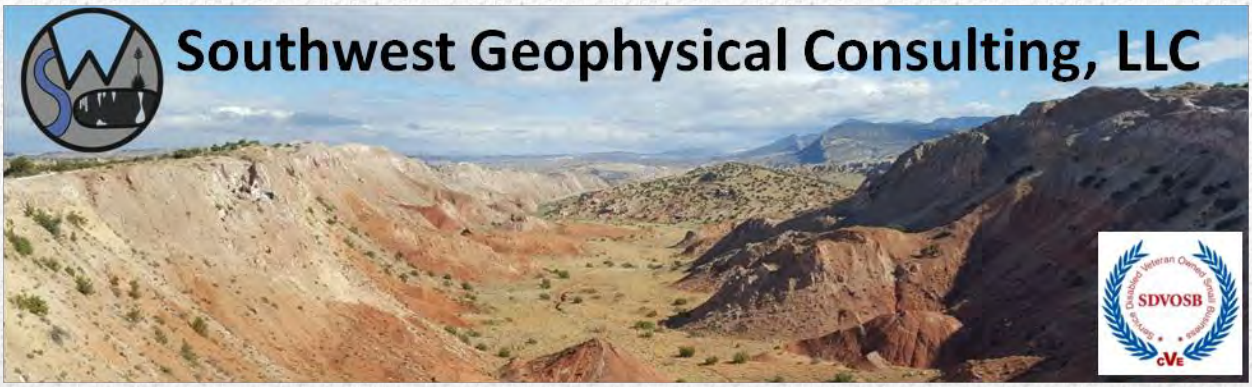
APPENDIX B

Karst Survey Results



Environmental Karst Study Report
XTO JRU DI 7
Eddy County, New Mexico

Prepared For:

Ensolum, LLC

3122 National Parks Highway

Carlsbad, NM 88220

Within 200 feet of the Spill Delineation Boundary:

☑ Negative ☐ Positive for surface karst

☑ Negative ☐ Positive for subsurface anomalies

☑ Stable ☐ Unstable Ground

☐ Karst Monitor Recommended

December 23, 2025

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1.0 INTRODUCTION

This report was commissioned by Ensolum, LLC (hereinafter referred to as "the client"), on November 18, 2025, for the purpose of conducting an environmental karst study within an area encompassing the XTO JRU DI 7 release site (hereinafter termed “XJD7”) centered at N 32.335517° W 103.824353°.

1.1 Goals of this Study

The goals of this study are to conduct a surface karst inventory and provide the client with the location and description of any surface karst features located within 200 feet (61 meters) of the spill delineation boundary (as defined by 19.15.29.12 NMAC[1]), and to determine whether stable ground exists (as defined by 19.15.2 NMAC Definitions[2]) within 200 feet of the spill delineation boundary of the XTO JRU DI 7 release as provided by the client via e-mail (**32.337892, -103.818703; 32.337881, -103.817181; 32.336705, -103.817184; 32.336742, -103.818710** (estimated 4 corners of the XTO JRU DI 7 Pad)) on November 18, 2025, using electrical resistivity imaging[3].

1.2 Summary of Findings

- **No surface karst features were found within 200 feet (61 meters) of the spill delineation boundary.**
- **No anomalies consistent with subsurface air- or water-filled voids were found within the XJD7 geophysical survey area, indicating the zone beneath the geophysical survey is not subject to collapse.**
- **Well-layered stratigraphy is interpreted to exist beneath the area where the geophysical survey was conducted, indicating stable ground within the 200-foot survey boundary.**

1.3 Affected Environment

The XJD7 project is located in evaporite karst terrain, a landform that is characterized by underground drainage through solutionally enlarged conduits. Evaporite karst terrain may contain sinkholes, sinking streams, caves, and springs. Sinkholes leading to underground drainages and voids are common. These karst features, as well as occasional fissures and discontinuities in the bedrock, provide the primary sources for rapid recharge of the groundwater aquifers of the region. Karst may develop by hypogene processes involving dissolution by upwelling fluids from depth independent of recharge from the overlying or immediately adjacent surface. Hypogene karst systems may not be connected to the surface and can remain undiscovered unless encountered during drilling or excavation.

Karst features are delicate resources that are often of geological, hydrological, biological, and archeological importance, and should be protected. The four primary concerns that need to be considered in these types of terrain are environmental issues, worker safety, equipment damage, and infrastructure integrity.

The Bureau of Land Management (BLM) categorizes all areas within the Carlsbad Field Office (CFO) zone of responsibility as having either low, medium, high, or critical cave potential based on geology, occurrence of known caves, density of karst features, and potential impacts to freshwater aquifers[1]. These designations are also recognized by the New Mexico State Land Office (NMSLO). This project occurs within a **MEDIUM** karst occurrence zone (MKOZ)[5] (**Figure 1**).

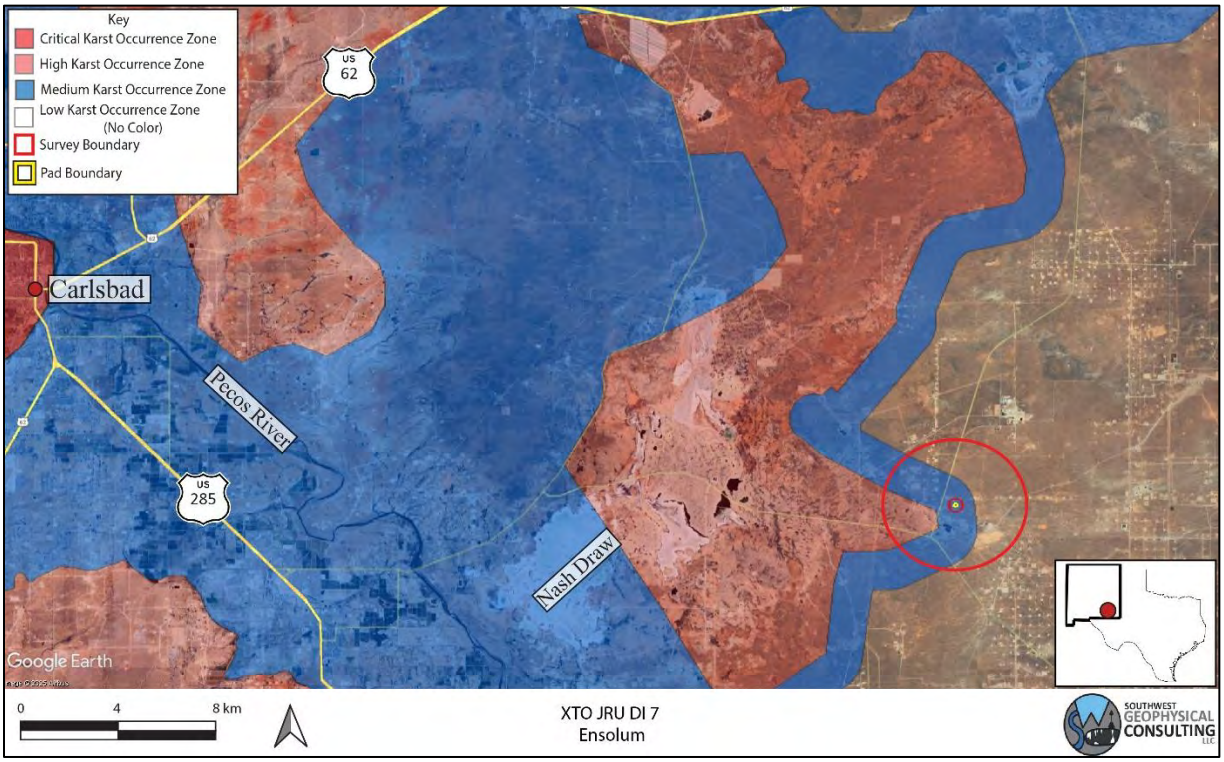

Figure 1: Karst occurrence zone overview. Please note the pad boundary represents the approximate location provided by the client. Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

A medium karst occurrence zone is defined as an area in known soluble rock types that may have a shallow insoluble overburden. These areas may contain isolated karst features such as caves and sinkholes. Groundwater recharge may not be wholly dependent on karst features, but the karst features still provide the most rapid aquifer recharge in response to surface runoff [4].

Due to the rapidity with which evaporite karst develops, each location within a BLM-CFO designated karst occurrence zone must be assessed on an individual basis to determine the existence of surface karst features and the possibility of sub-surface karst development each time a release occurs.

1.4 Limitations of Report

This report should be read in full. No responsibility is accepted for the use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

This report has been prepared for the use of Ensolum, LLC, in accordance with generally accepted consulting practices. Every effort has been made to ensure the information in this report is accurate as of the time of its writing. This report has not been prepared for use by parties other than the client, their contracting party, and their respective consulting advisors. It may not contain sufficient information for the purposes of other parties or for other uses.

This report was prepared upon completion of the associated fieldwork using a standard template prepared by Southwest Geophysical Consulting and is based on information collected prior to fieldwork, conditions encountered on-site, and data collected during the fieldwork and reviewed at the time of preparation. Southwest Geophysical Consulting disclaims responsibility for any changes that might have occurred at the site after this time. The interpreted results, locations, and depths noted in this report (if applicable) should be taken as an interpretation only and no decision should be based solely on this information. Physical verification of aerial imagery analysis results should be conducted in the field prior to using this information for remediation planning. Physical verification of geophysical results using geotechnical methods should be conducted.

To the best of our knowledge, information contained in this report is accurate at the date of issue; however, conditions on the site can change over a short period of time and, therefore, the information in this report should not be used beyond two years, and shall not be used beyond five years past the date of the imagery collection reported in section ***2.3 Description of Survey***, as per BLM guidelines. Large weather events can shorten this time period as areas subject to karst development can rapidly form new features subsequent to these events.

2.0 LOCATION AND DESCRIPTION OF STUDY AREA

2.1 Description of Site

The site is located 39.7 kilometers (24.7 miles) east-southeast of Carlsbad, New Mexico, north of the Jal Highway and east of Wipp Road. The pad is located within section 6 of NM T23S R31E[6] (**Figure 1** and **Figure 2**). The region has rolling terrain with karstification occurring in the gypsite soils and underlying gypsum and dolomite bedrock[7] (see section ***2.2 Local Geology Summary*** for further information). The climate in this area of southeast New Mexico is semi-arid with an average annual precipitation of approximately 13 inches, of which about two-thirds falls as rain during summer thunderstorms from June to October. Summers are hot and sunny while winters are generally mild, with an average maximum temperature of 96°F in July and an average minimum temperature of 28°F in January[8]. This area is within the Chihuahuan Desert Thornscrub as defined by the Southwestern Regional ReGAP Vegetation map[9] and the vegetation consists mostly of areas of blue grama, nine-awned pappus grass, burro grass and low scrub including yucca. The survey area is located within an MKOZ[5] (**Figure 1**) and within BLM-CFO managed lands[10] (**Figure 2**).

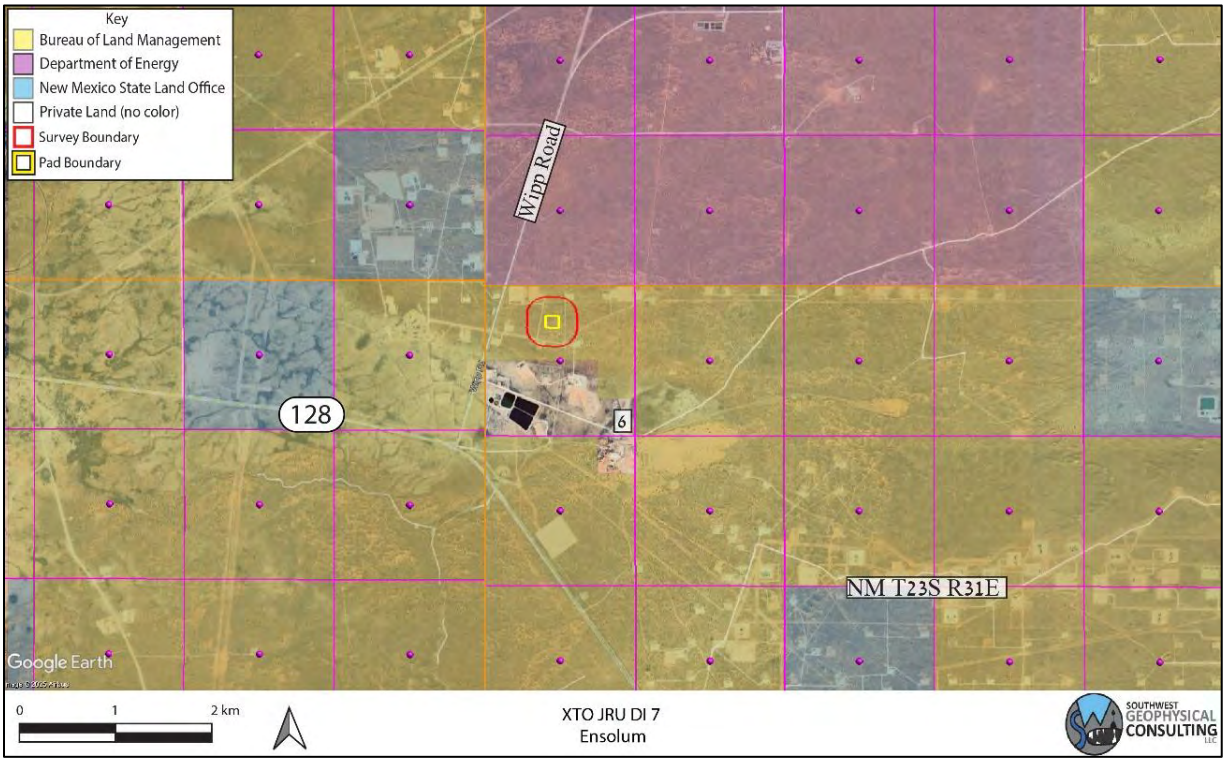

Figure 2: Land ownership and PLSS overview. Please note the pad boundary represents the approximate location provided by the client. Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

2.2 Local Geology Summary

The site for the XJD7 survey is located at an elevation of 1,012 meters (3,320 feet), ± 4 meters (13.1 feet). This region is entirely underlain by the Permian Rustler Formation (Pru). The area is mantled by thin gypsiferous soils (gypsite), Quaternary alluvial piedmont (Qp) and eolian deposits (Qe)[11] up to 5 meters in depth (**Figure 3**).

The Rustler Formation is an evaporite facies composed mainly of thin siltstones and sandstones interbedded with claystones, dolomite, and gypsum, and contains both karst-forming strata (the Forty-niner and Tamarisk members) and two shallow aquifers (the Magenta and Culebra Dolomite members)[12].

The Pru overlies the Permian Salado Formation (Psl – not shown), a layer of extremely soluble halite which can readily dissolve to create caves, sinkholes, and other karst features; however, due to its extremely soluble nature, only non-soluble silt and sand remain from the dissolution of this layer at the surface[12]. The Rustler Formation may be subject to collapse if a void has developed beneath it in the Salado Formation[13].

The survey area is covered by the easily accessible Geologic Map of New Mexico (2003) at 1:500,000 scale[14] and the Digital Geologic Map of New Mexico in ARC/INFO Format[11].

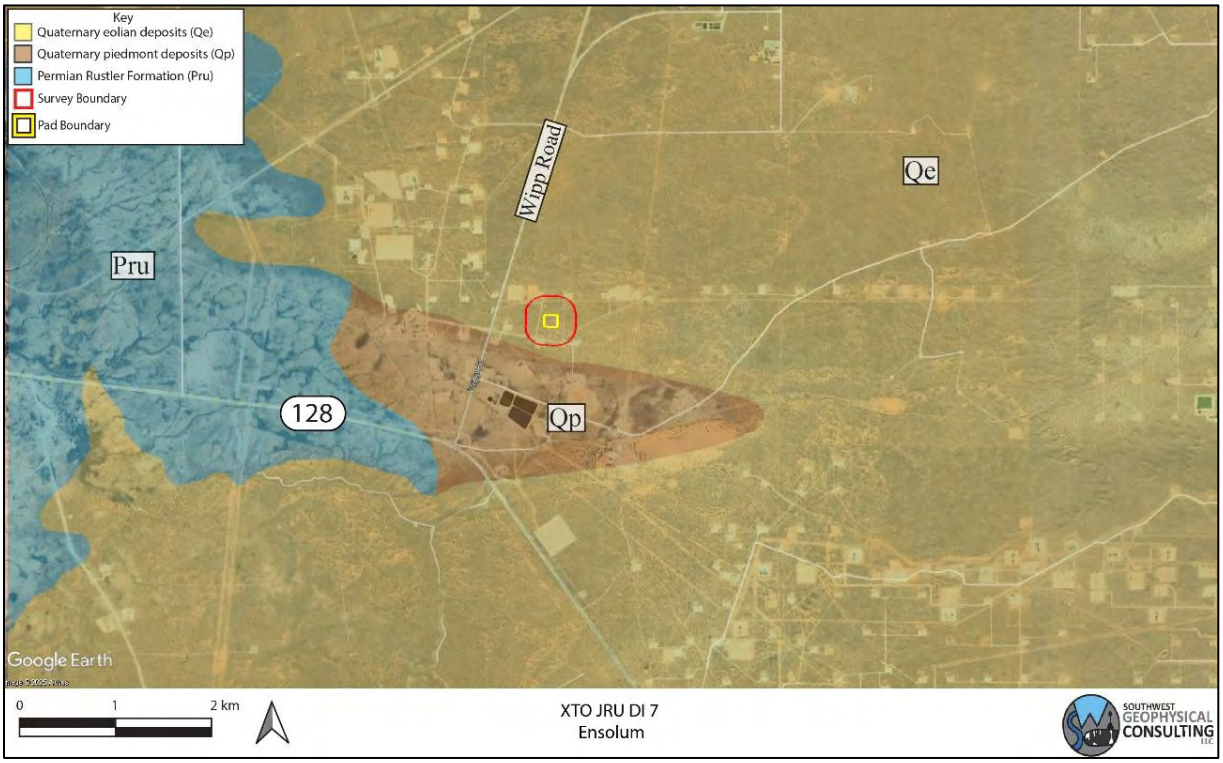

Figure 3: Geology overview. Please note the pad boundary represents the approximate location provided by the client. Geology map credit: The Digital Geologic Map of New Mexico in ARC/INFO Format. Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

2.3 Description of Survey

2.3.1 Surface Karst Survey

Southwest Geophysical Consulting, in partnership with SWCA Environmental Consultants, provides surface karst surveys using small, uncrewed aerial systems (sUAS) that are flown by qualified, FAA licensed drone pilots and that meet the stringent Bureau of Land Management – Carlsbad Field Office requirements for both pedestrian and aerial karst surveys.

The surface karst survey includes a desk study prior to the flight which allows us to provide client feedback in the event of any previously known karst features in the area. The desk study is performed out to 305 meters (1,000 feet) from the spill delineation boundary per New Mexico Oil Conservation Division guidance [1] (**Figure 4**). The study was performed using satellite and aerial imagery from Google Earth Pro dated April 2, 2023 (please note features less than one meter in diameter are generally not visible using this method); the Southwest Geophysical Cave and Karst Database dated November 17, 2025[15]; the Los Medanos, NM, 1:24,000 quad, 1985, USGS topographic map; and the latest lidar imagery from CalTopo.com. Please note that we use older topographic maps because newer maps have had caves removed from them. These searches and queries returned no results within the survey boundary.

Surface karst surveys are conducted by sUAS at low elevation within 200 meters of the spill delineation boundary[4] (**Figure 4**) following a preplanned raster pattern flightpath designed for the purpose of generating at least 75% imagery overlap. The collected high-resolution, georeferenced imagery is stitched together to develop orthomosaic imagery which is further developed into a digital elevation model (DEM); the DEM is then processed into a local relief model (LRM) (**Figure 6**). This LRM is color coded to enhance differences in elevation of as little as five centimeters. The orthoimagery, DEM, and LRM are uploaded to a server where they are analyzed by an experienced karst geologist. Finally, the data is reviewed by a senior karst geologist for quality assurance and downloaded into a table for inclusion in a written report[16].

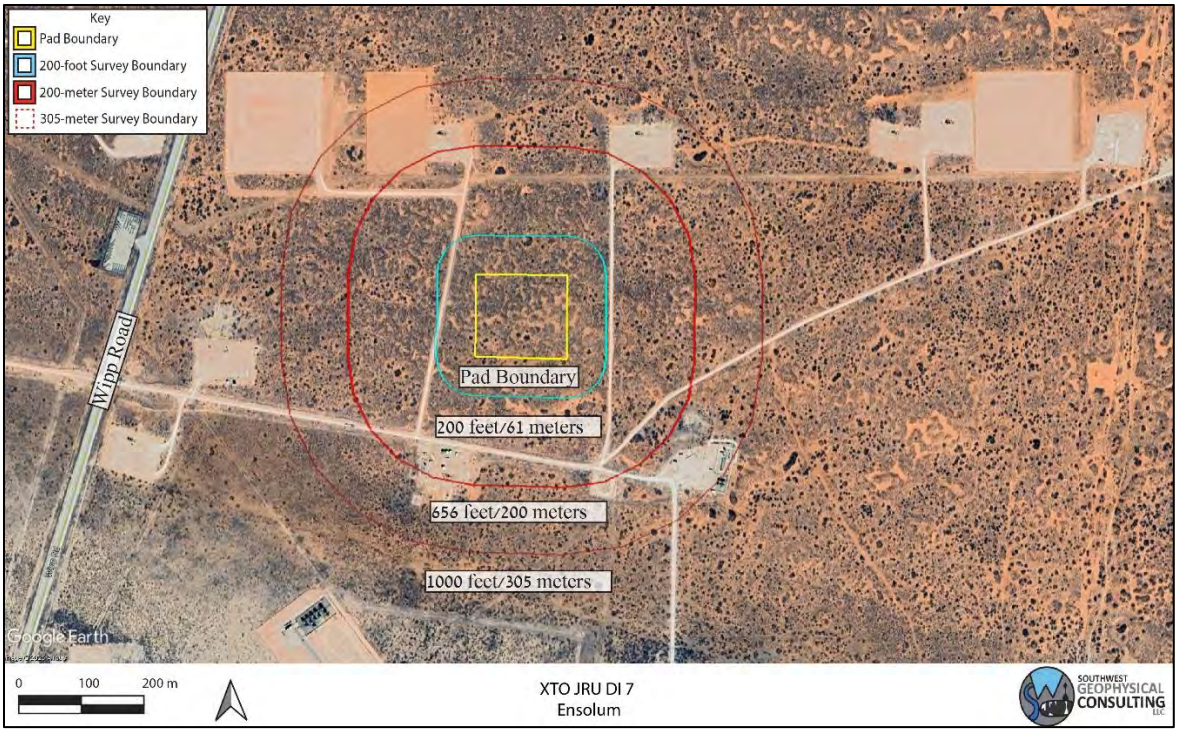

Figure 4: Surface survey overview. Please note the pad boundary is the approximate location provided by the client. Background image credit: Google Earth. Image date: April 2, 2023. Datum: WGS-84.

The resolution of the orthoimagery is clear enough that features as small as 10 centimeters can be positively identified in most circumstances. Occasionally there are ambiguous features identified during an aerial survey that will need to be checked in the field if they are impacted by the proposed remediation efforts. Specifically, it is difficult to tell the difference between solution tubes, abandoned uncased well bores, and some burrows in drone imagery. If an ambiguous feature is located during imagery analysis, it is marked with a yellow dot in **Figure 6**. If a feature of any likelihood is subsequently verified in the field prior to publication of the report, the dot will be changed to a red triangle if confirmed as a karst feature or deleted if not.

The imagery for this study was collected via aerial survey by Pat Lagodney of SWCA on November 21, 2025. Surface karst features may have developed after this date and will not be noted in this report. Imagery analysis was completed by Britt Bommer of Southwest Geophysical Consulting on November 28, 2025.

2.3.2 Geophysical Survey

For this survey, an Advanced Geosciences Inc. (AGI) SuperSting™ Wifi R8 with an 8-channel switchbox, a 56-electrode array of 40-centimeter-long (1.3 feet) stainless-steel electrodes, and a tablet controller were used to image the subsurface. This survey consisted of two resistivity lines consisting of 56 electrodes at 5-meter spacing in a dipole-dipole configuration, resulting in 275-meter-long arrays. Line XJD701 is laid out west to east, while line XJD702 is laid out south to north. (**Figure 5**, **Table 1**).

A preconfigured command file was used to run the data collection (DiDi56) which consisted of a dipole-dipole survey. This electrode configuration provided a depth of investigation of up to 55 meters (180 feet) in this location at a resolution of 2.5 to 3.0 meters (8.3 to 9.8 feet) near the surface. A Leica GS18 GPS was used to record electrode locations and elevations. On this survey, the estimated horizontal error mean was 7 cm (2.75 inches) and the estimated vertical error mean was 12 cm (4.7 inches).

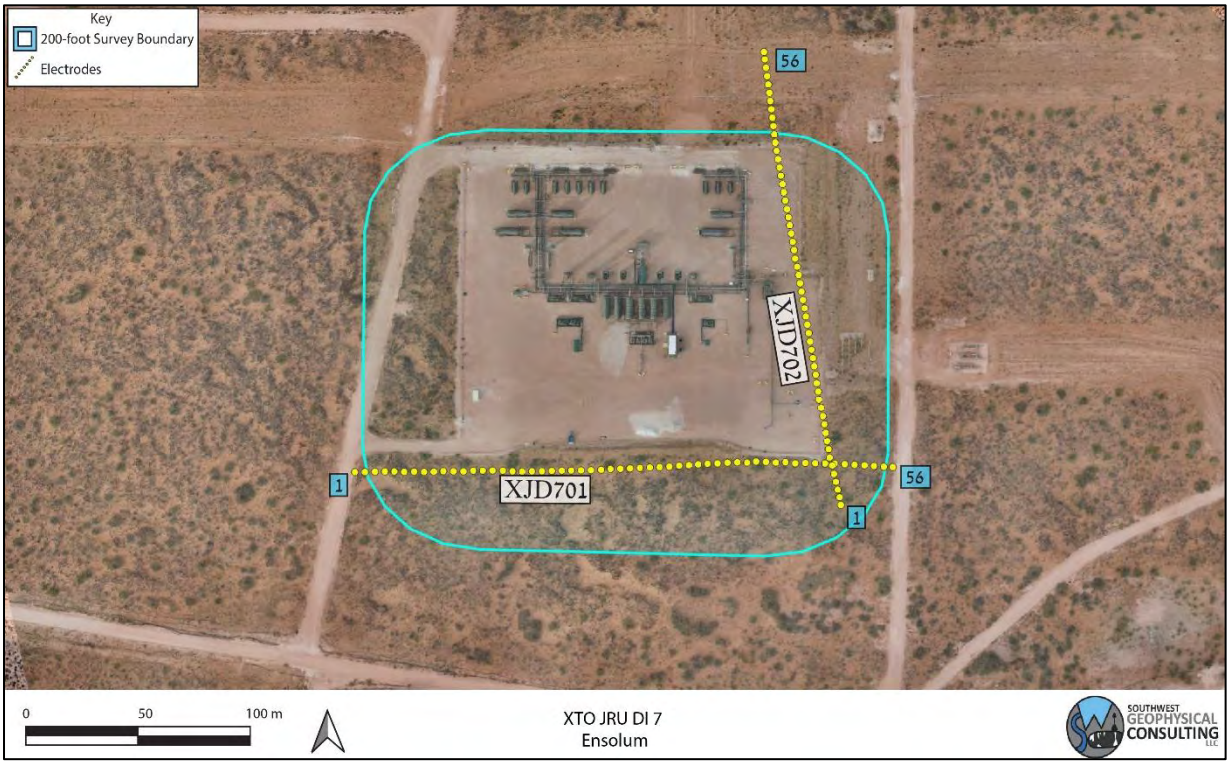

Figure 5: Geophysical survey overview. Two survey lines were conducted with 56 electrodes each at 5-meter spacing (yellow dots denoted with blue numbers). Please note that orthographic imagery is shown as the pad does not yet appear on Google satellite/aerial imagery. The approximate pad boundaries provided by the client were omitted because they do not match the actual pad location. Background image datum: WGS-84.

Table 1 provides basic line data. Detailed information including electrode number, location in latitude/longitude (decimal degree format), and elevation in meters can be found in the accompanying data files.

Table 1: Survey Line Data Table. The .kmz file contains all the points for the survey line listed in the file name. These data are available in the accompanying files XJD7_ERI_Points.xlsx and ENS-030-20251118_XJD7_Data_Files.kmz.

File Name:	Completed By:	Date:
XJD701.kmz	Garrett Jorgensen Olague – Senior Field Geologist Britt Bommer – Field Geologist Aaron Beirl – Field Geologist	12/3/2025
XJD702.kmz		

EarthImager™ 2D software was used to download and process the data and to provide the model used to make our interpretations. The design of the survey and the orientation of each of the lines provides the information necessary to make the determination of “stable” or “unstable” ground at this site.

A typical starting model was used for the data processing due to the two-layer model of the geology in the area; specifically, generally high-resistivity gypsum and dolomite at the surface and low-resistivity saturated gypsum and dolomite bedrock at depth. The starting model used was “average apparent resistivity” and a default inversion setting of “surface,” with a minimum apparent resistivity set to 0.1 Ohm-meters (Ohm-m or Ω-m) and a max apparent resistivity set to 100,000 Ω-m (**Table 2**).

Table 2: Software Information and Settings

Software Name:	EarthImager™ 2D
Version:	2.4.4.649
Starting Model:	Average Apparent Resistivity
Default Inversion Settings:	Surface
Changes to Default Inversion Settings:	Max Apparent Resistivity = 100 kΩ-m Min Apparent Resistivity = 0.1 Ω-m

Note: Raw data files (.stg files for EarthImager™ 2D) and processed data (.trn files, terrain files for surface correction in EarthImager™ 2D and .out files, the processed .stg files) are available upon request.

All field work, including setup, stow, and travel, was completed by Garrett Jorgensen Olague, Britt Bommer, and Aaron Beirl on December 3, 2025.

3.0 RESULTS

3.1 Surface Karst Survey

The desk study and surface karst survey showed no surface karst features within 305 meters (1,000 feet)[1] of the pad boundary (**Figure 6**).

No springs exist within the 305-meter (1,000-foot)[1] survey boundary (**Figure 6**).

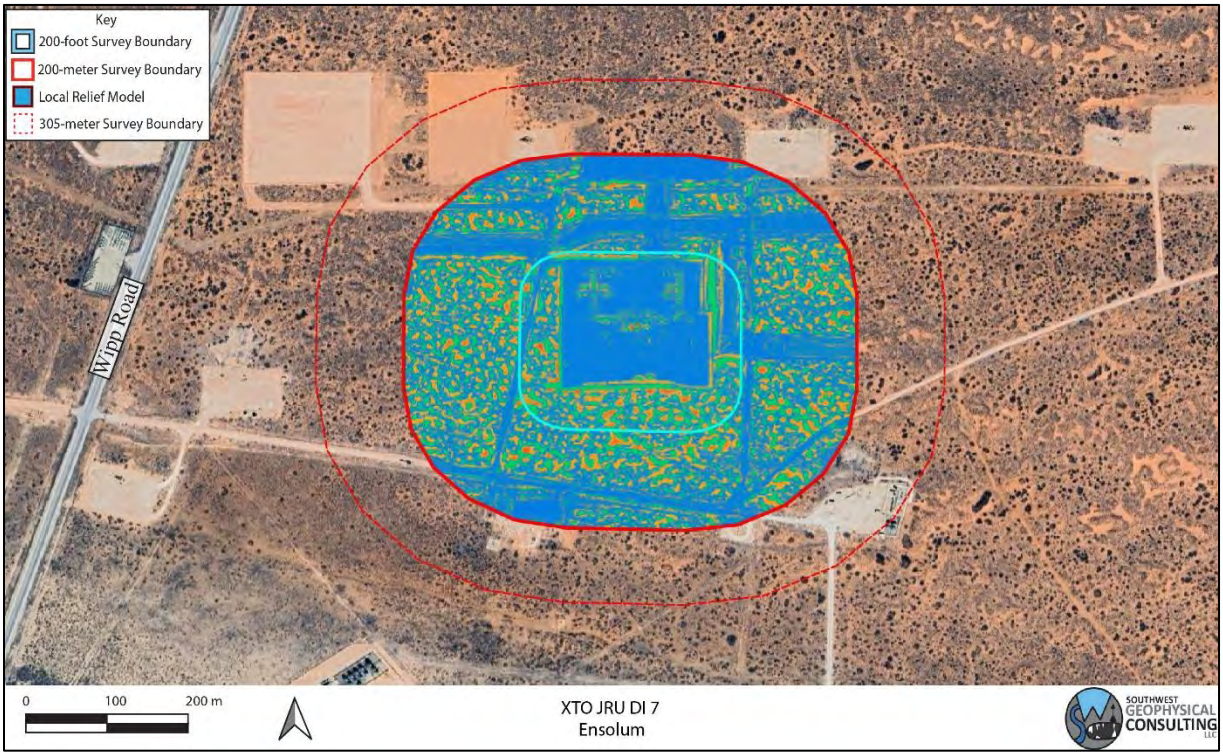

Figure 6: Surface karst survey results. Background image credit: Please note that orthographic imagery is shown as the pad does not yet appear on Google satellite/aerial imagery. The approximate pad boundaries provided by the client were omitted because they do not match the actual pad location. Background image datum: WGS-84.

3.2 Geophysical Survey

Electrical resistivity tomography forms images of the subsurface by causing a current to flow through the rock and soil and then measuring the resistance of these materials as the current flows through them. This measurement is taken many times and the resulting data, once processed, is used to produce a model of the subsurface (**Figure 7**). This model is produced using "non-unique" solutions, which means that there are many models and interpretations which will satisfy the data. Using experience and knowledge of the local geology, a high-confidence model can be established and used to develop an accurate understanding of what lies below the surface. This survey was conducted with the express purpose of locating subsurface voids and does not purport to find paleokarst (old, non-active karst features that have been filled in with sand and sediment) or nascent karst features below the resolution limit of the survey.

The results of this study indicate a well-layered geologic system with resistivities between 14.4 and 300 Ohm-m with occasional areas up to 1,822 Ohm-m (**Figure 7**). Please keep in mind when viewing the 2D inverted resistivity sections that color maps can be widely different for each view. Always check the color map located on the right side of the image when viewing the 2D images to ensure you understand the range of resistivities presented. Distances along the top and depths along the left side are in meters. The color map along the right side is in Ohm-m. Due to the nature of the survey, shallower zones have higher resolution between electrodes than deeper zones; therefore, small features at depth will not be visible.

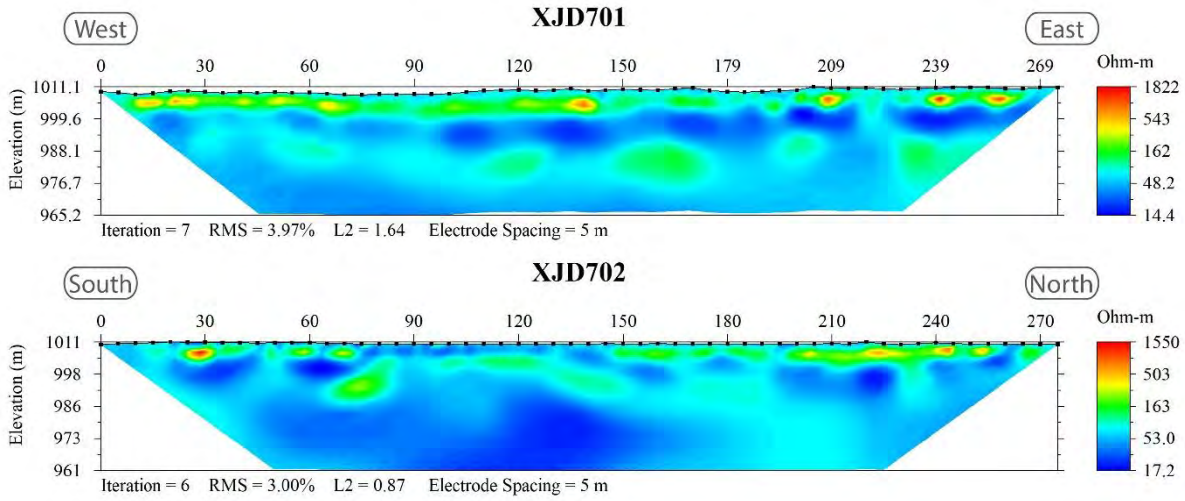

Figure 7: 2D inverted resistivity section. Reds and oranges indicate higher resistivity values. Yellows and greens are medium-resistivity values. Blues are low-resistivity values. Please note that the color scale is relative.

4.0 DISCUSSION

No surface karst features and no anomalies consistent with air-filled subsurface voids are found within the XJD7 survey area. However, small solutionally enlarged voids or fractures at or near the resolution limit of the survey (2.5 – 3.0 meters) may be present. Areas of higher resistivity (reds, yellows, and greens) near the surface are interpreted as dry gypsite soils and gypsum or dolomite bedrock of the Rustler Formation[17] (**Figure 7** and **Figure 8**).

Low-resistivity areas between 14.4 – 25 Ohm-m may fluid from a brine release, surface-to-subsurface hydrologic pathways, or a layer of either clays or halite lenses, or moist to saturated layers within the Rustler Formation (**Figure 7**).

Please remember that these are interpretations made from knowledge of the local subsurface materials and experience. **They remain interpretations until verified by geotechnical methods.** Employing a BLM-CFO approved karst monitor on site during any drilling and/or remediation activities that require excavation below four feet in depth should be considered.

Fracture sets within the subsurface can act as hydrologic pathways to the water table. Rapid dissolution of gypsum can occur along these pathways creating solution-enlarged fractures, and in some cases, voids within months to years. For this reason, this survey is valid only for this remediation event.

Within karst terrains like the project site, small air- or sediment-filled voids and/or brecciated zones and solutionally enlarged fractures that are below the resolution limit of the survey (2.5–3.0 meters) may exist; these may be encountered during excavation, and if so, should be evaluated by a karst specialist prior to continued work.

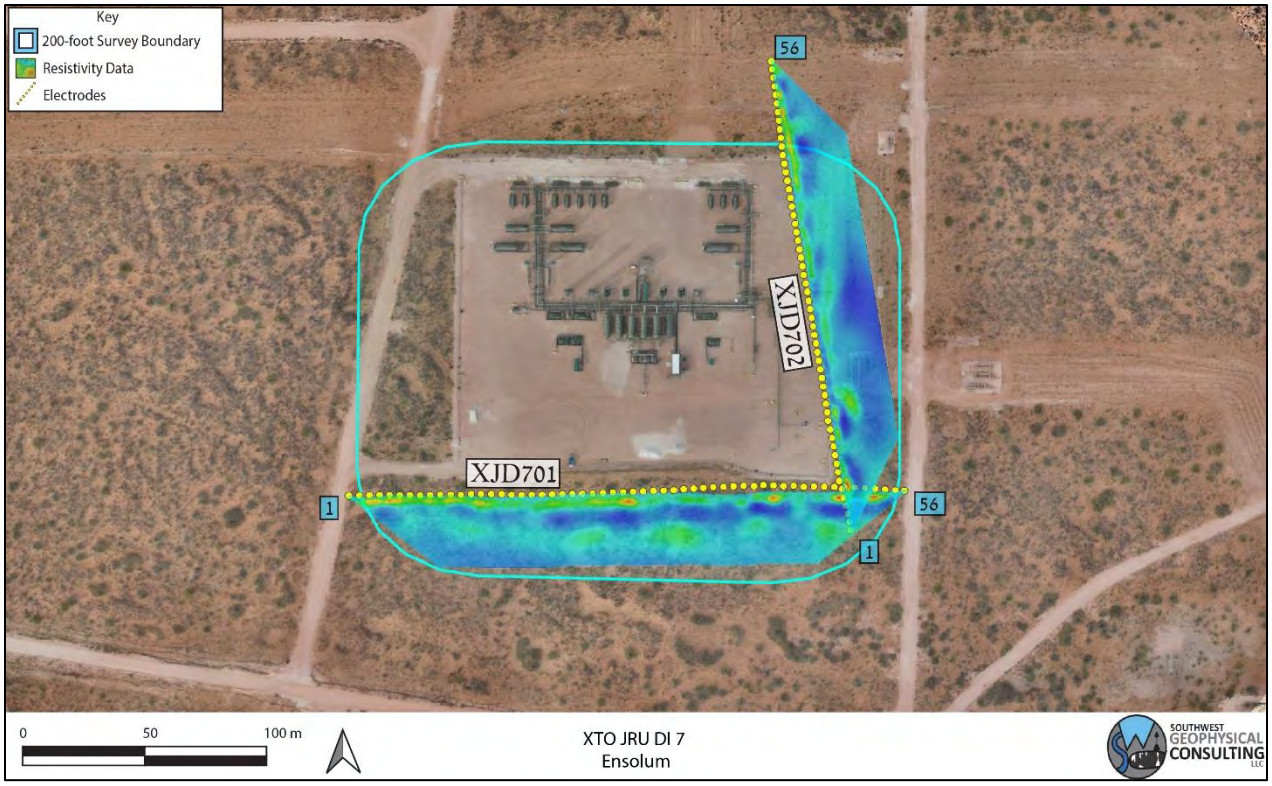

Figure 8: Data overlay. Colored trapezoids are the 2D inverted resistivity lines. Please note that orthographic imagery is shown as the pad does not yet appear on Google satellite/aerial imagery. The approximate pad boundaries provided by the client were omitted because they do not match the actual pad location. Background image datum: WGS-84.

5.0 SUMMARY

- **The XJD7 survey contains no surface karst features within 200 feet (61 meters) of the spill delineation boundary.**
- **No shallow anomalies interpreted as large voids or related karst features that would present a danger to equipment operators are located within the geophysical survey area.**
- Intercepting a void during remediation is unlikely, but still possible. Small voids or solutionally enlarged fractures below the resolution limit of the survey may be encountered.
- **Well-layered stratigraphy is interpreted to exist beneath the geophysical survey lines indicating stable ground in the area of the subsurface investigation.**
- When conducting any remediation activities in this area, employing a BLM-CFO approved karst monitor on site should be considered.

6.0 DISCLOSURE STATEMENT

Karst occurrence zones are prone to rapid karst formation and warrant careful planning and engineering to mitigate karst-forming processes that could be accelerated by removal of surface cover or the vibrations associated with heavy equipment used in the remediation process.

Mitigation measures for any karst features revealed during excavation shall be approved by the Bureau of Land Management – Carlsbad Field Office and follow the Natural Resources Conservation Service Conservation Practice Standard for Karst Sinkhole Treatment, Code 527, or the Bureau of Land Management Cave and Karst Management Handbook, H-8380-1.

Vigilance during remediation activities is paramount. If voids are encountered during excavation, contact the Bureau of Land Management Karst Division at (575) 234-5972, the New Mexico State Land Office Surface Resources Division at (505) 827-5768, or a BLM-CFO approved karst contractor and request an on-site investigation from a karst expert if one is not already on site. A karst consultant can generally be available in Eddy County within five hours.

Approved karst monitors should have karst feature identification training, at least two years of supervised experience identifying karst features, wilderness first aid training, SRT training, confined space training, gas monitor training, and a minimum of SPAR cave rescue training through NCRC. They should have with them the proper gear and be prepared both physically and mentally to enter a collapse feature within minutes to perform a rescue if needed. Monitoring services with qualified karst monitors, as well as cave surveys and geophysical surveys, are available from Southwest Geophysical Consulting.

Under no circumstances should an untrained, inexperienced person enter a cave, pit, sinkhole, or collapse feature. All field employees of Southwest Geophysical Consulting have extensive caving experience and the ability to determine whether entry into a karst feature is safe or presents a hazard. In the event it is necessary to enter a karst feature, Southwest Geophysical Consulting can provide these services on request.

Cave and karst resource inventory reports, karst feature investigations, and geophysical reports (along with the associated data files) commissioned at the request of the land manager should be submitted to BLM-CFO at blm_nm_karst@blm.gov.

Cave and karst resource inventory reports for the NMSLO should be submitted to the respective project manager.

Environmental karst reports should be submitted to the appropriate project manager at the New Mexico Oil Conservation Division.

7.0 REFERENCES

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8.0 GLOSSARY OF TERMS

AGI	Advanced Geosciences Inc.
BLM-CFO	Bureau of Land Management - Carlsbad Field Office
brecciated	Fractured rock caused by faulting or collapse.
caprock-collapse sinkhole	Collapse of roof-spanning rock into a cave or void.
cave	Natural opening at the surface large enough for a person to enter.
cover-collapse sinkhole	Collapse of roof-spanning soil or clay ground cover into a subsurface void.
ERI	Electrical Resistivity Imaging
GPS	Global Positioning System
grike	A solutionally enlarged, vertical, or sub-vertical joint or fracture.
(H)	High confidence modifier for a PKF. This is typically reserved for a feature that is definitely karst but has not been confirmed in the field.
HKOZ	High Karst Occurrence Zone
karst	A landscape containing solutional features such as caves, sinkholes, swallets, and springs.
(L)	Low confidence modifier for a PKF. This is typically a feature that cannot be ruled out as karst but is most likely NOT karst related. This modifier may also be used for pseudokarst features.
(M)	Medium confidence modifier for PKF. This is an ambiguous feature that can't be positively identified as karst without a field visit (e.g., burrows, abandoned unlined wells, solution tubes, pseudokarst).
MKOZ	Medium Karst Occurrence Zone
NCRC	National Cave Rescue Commission
NKF	Non-karst feature. Used for features originally identified as PKF that have been subsequently identified in the field as non-karst related. This term may also be used for pseudokarst features.
NMSLO	New Mexico State Land Office
Ohm-m	Ohm-meter, a unit of measurement for resistivity. Sometimes abbreviated Ω-m.
paleokarst	Previously formed karst features that have been filled in by erosion and/or deposition of minerals.
Pat	Permian Artesia Group
Pc	Permian Capitan Formation
Pcs	Permian Castile Formation
Pdl	Permian Dewey Lake Formation
PKF	Possible karst feature. This term is reserved for features identified in satellite or aerial imagery that have NOT been visited in the

	field. Further modifiers include (H) for high confidence, (M) for medium confidence, and (L) for low confidence. These confidence levels are based on field experience.
PLSS	Public Land Survey System
Pqg	Permian Queen/Greyburg Formation
Pru	Permian Rustler Formation
pseudokarst	Karst-like features (sinkholes, conduits, voids etc.) that are not formed by dissolution. These types of features include soil piping, lava tubes, and some cover-collapse and suffosion sinkholes.
Psl	Permian Salado Formation
Psr	Permian Seven Rivers Formation
Pt	Permian Tansill Formation
Py	Permian Yates Formation
Qal	Quaternary alluvium
Qe	Quaternary eolian deposits
Qp	Quaternary piedmont deposits
Qpl	Quaternary playa lake deposits
RKF	Recognized karst feature. This term is reserved for karst features that have been physically verified in the field.
SPAR	Small Party Assisted Rescue
sUAS	Small, uncrewed aerial system
suffosion sinkhole	Raveling of soil into a pre-existing void or fracture.
swallet	A natural opening in the surface, too small for a person, that drains water to an aquifer. Some are "open," meaning a void can be seen below; some are "closed, "meaning they are full of sediment.
SWG	Southwest Geophysical Consulting, LLC
UTM	Universal Transverse Mercator (projected coordinates)
(V)	Field verified modifier for a RKF. This indicates that the feature has been visited by a qualified karst professional in the field and fully identified
WGS	World Geodetic System (geographic coordinates)

9.0 ATTESTATION

David D. Decker, PhD, PG, CPG
Chief Executive Officer, Principal Geologist
Southwest Geophysical Consulting, LLC
5117 Fairfax Dr. NW
Albuquerque, NM 87114
dave@swgeophys.com
(505) 585-2550

CERTIFICATE OF AUTHOR

I, David D. Decker, a Licensed Professional Geologist and a Certified Professional Geologist, do certify that:

- I am currently employed as a consulting geologist in the specialty of caves and karst with an office address of 5117 Fairfax Dr. NW, Albuquerque, NM, USA, 87114.
- I graduated with a Master of Science in Applied Physics with a specialization in Sensor Systems from the Naval Post Graduate School in Monterey, California, in 2003, and a Doctor of Philosophy in Earth and Planetary Sciences from the University of New Mexico, Albuquerque, New Mexico, in 2018.
- I am a Licensed Professional Geologist in the State of Texas, USA (PG-15242) and have been since 2021. I am a Certified Professional Geologist through the American Institute of Professional Geologists (CPG-12123) and have been since 2021.
- I have been employed as a geologist continuously since 2016. I was previously employed as a Fire Controlman, Naval Flight Officer, and Aerospace Engineering Duty Officer in the U.S. Navy and operated, maintained, and installed various sensor systems including magnetic, electromagnetic, radar, communications, and acoustic systems in various capacities from 1986 through 2010.
- I have been involved in various aspects of cave and karst studies continuously since 1985, including exploration, mapping, and scientific studies.
- I have read the definition of “qualified karst professional” set out in the ASTM Standard Practice for Preliminary Karst Terrain Assessment for Site Development (ASTM E-1527). I meet the definition of “qualified professional” for the purposes of this standard.
- I am responsible for the content, compilation, and editing of all sections of report number ENS-030-20251118 entitled, “Environmental Karst Study Report, XTO JRU DI 7, Eddy County, New Mexico.” I or a duly authorized and qualified representative of Southwest Geophysical Consulting, LLC, have personally visited this site and/or reviewed the aerial imagery on the date or dates mentioned in section ***2.3 Description of Survey***.

- I have no prior involvement nor monetary interest in the described property or project, save for my fee for conducting this investigation and providing the report.

Dated in Albuquerque, New Mexico, December 27, 2025.

David D. Decker
PhD, CPG-12123

ENSOLUM

APPENDIX C

Photographic Log

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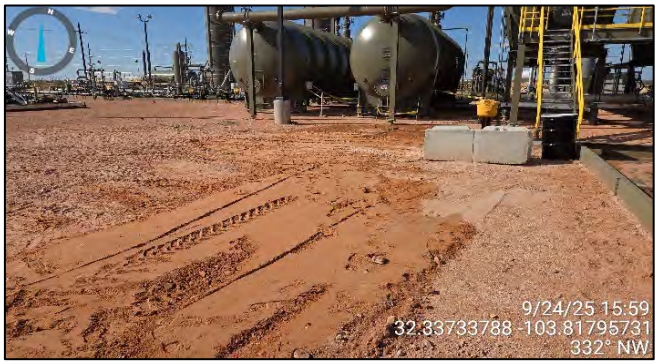
Photographic Log
XTO Energy, Inc
James Ranch Unit DI 7 Battery
nAPP2525557554

Photograph: 1 Date: 9/10/2025
Description: Initial release extent
View: South

Photograph: 2 Date: 9/10/2025
Description: Initial release extent
View: North

Photograph: 3 Date: 9/10/2025
Description: Initial release extent
View: East



Photograph: 4 Date: 9/24/2025
Description: Delineation activities; near PH01
View: Northwest

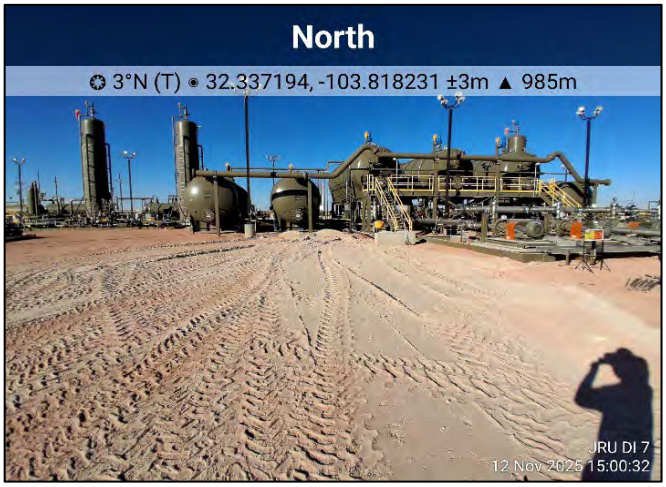
ENSOLUM

Photographic Log
XTO Energy, Inc
James Ranch Unit DI 7 Battery
nAPP2525557554

Photograph: 5 Date: 10/29/2025
Description: Excavation activities; near FS01
View: Northwest

Photograph: 6 Date: 10/30/2025
Description: Excavation activities; near FS03
View: West

Photograph: 7 Date: 11/12/2025
Description: Excavation activities; facing FS04
View: Southeast



Photograph: 8 Date: 11/12/2025
Description: Backfill activities
View: North

ENSOLUM

APPENDIX D

Lithologic Soil Sampling Logs

ENSOLUM

Sample Name: PH01	Date: 9-24-2025
Site Name: James Ranch Unit DI 7	
Incident Number: nAPP2525557554	
Job Number: 03C1558744	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Evan Roe / Method: Backhoe
Coordinates: 32.337382, -103.817962	Hole Diameter: 2ft / Total Depth: 11ft

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor for chlorides is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	313	2,025	Y	PH01	0.5		SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	229	2,122	Y	PH01	1	1	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	49.5	Y		2	2	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	300	Y		3	3	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	175	N	PH01	4	4	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	97.8	N	PH01	5	5	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	54.0	N		6	6	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	49.6	N	PH01	7	7	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	56.0	N		8	8	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	1,154	N	PH01	9	9	SM	Sand, Brown, Fine, with caliche
Dry	<162	60.8	N		10	10	SM	Sand, Brown, Fine, with caliche
Dry	<162	184	N	PH01	11	11	SM	Caliche, Brown/Gray, Fine

Total Depth @ 11 feet bgs

ENSOLUM

Sample Name: PH02	Date: 9-24-2025
Site Name: James Ranch Unit DI 7	
Incident Number: nAPP2525557554	
Job Number: 03C1558744	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Evan Roe	Method: Backhoe
Coordinates: 32.337310, -103.817955	Hole Diameter: 2ft / Total Depth: 10ft

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor for chlorides is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	<162	1,125	Y	PH02	0.5	0.5	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	1,226	Y	PH02		1	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	1,605	Y	PH02	2	2	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	1,130	Y	PH02		3	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	115	Y	PH02	4	4	SM	Sand, Brown, Fine, Uniform with some rocks, strong odor.
Dry	<162	121	N	PH02	5	5	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	52.2	N		6	6	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	39.9	N	PH02	7	7	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	40.1	N		8	8	SM	Sand, Brown, Fine, Uniform with some rocks
Dry	<162	165	N	PH02	9	9	SM	Sand, Brown, Fine, with caliche
Dry	<162	116	N	PH02	10	10	SM	Sand, Brown, Fine, with caliche

Total Depth @ 10 feet bgs

ENSOLUM

APPENDIX E

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

September 29, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 09/25/25 13:55.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: SS 01 SURFACE (H256000-01)

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	09/26/2025	ND	1.90	94.8	2.00	0.318	
Toluene*	<0.050	0.050	09/26/2025	ND	1.98	98.9	2.00	1.92	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	1.96	98.2	2.00	2.47	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	6.05	101	6.00	2.38	
Total BTEX	<0.300	0.300	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *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	**384**	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

Surrogate: 1-Chlorooctane *92.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *91.5 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: SS 02 SURFACE (H256000-02)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	**0.198**	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

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

Surrogate: 1-Chlorooctadecane *82.4 %* *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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: SS 03 SURFACE (H256000-03)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.3 %* *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	**464**	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

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

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: SS 04 SURFACE (H256000-04)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.3 %* *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	**464**	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

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

Surrogate: 1-Chlorooctadecane *87.2 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: SS 05 SURFACE (H256000-05)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *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	**256**	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

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

Surrogate: 1-Chlorooctadecane *86.8 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Page 1 of 1

Company Name:	Ensolum, LLC
Project Manager:	Tracy Hillard
Address:	601 N Marienfeld Street, Suite 400
City:	Midland State: TX Zip: 79701
Phone #:	575-937-3906 Fax #:
Project #:	03C1558744 Project Owner: XTO
Project Name:	JRU DI 7 -SPILLS
Project Location:	32.337522, -103.818163
Sampler Name:	Evan Roe

BILL TO

P.O. #:	
Company:	XTO Energy, Inc
Attn:	Colton Brown
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.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015 M/D	BTEX 8021B	Chloride SM4500
H2516000																		
1	SS 01	Surface	G	1			✓					✓		09/24/2025	1455	✓	✓	✓
2	SS 02	Surface	G	1			✓					✓		09/24/2025	1458	✓	✓	✓
3	SS 03	Surface	G	1			✓					✓		09/24/2025	1501	✓	✓	✓
4	SS 04	Surface	G	1			✓					✓		09/24/2025	1504	✓	✓	✓
5	SS 05	Surface	G	1			✓					✓		09/24/2025	1507	✓	✓	✓

Relinquished By: Evan R	Date: 9.25.25 Time: 1355	Received By: S Rodriguez	
Relinquished By:	Date: Time:	Received By:	

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

All Results are emailed. Please provide Email address:
THillard@ensolum.com, KThomason@ensolum.com
BBelill@ensolum.com, TMorrissey@ensolum.com

REMARKS:
Incident Number: nAPP2525557554
Cost Center: 2256891001
GCFM: 48605000

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.4	Sample Condition Cool: ☐ Yes ☐ No	CHECKED BY: (Initials) SR	Turnaround Time: Standard ☐ Rush ☑ 48h
FORM-006 R 3.6 02/12/25	Corrected Temp. °C 0.7	Intact: ☐ Yes ☐ No		Thermometer ID #140 Correction Factor +0.3°C

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

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

CARDINAL Laboratories

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

September 29, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 09/25/25 13:55.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 01 0.5 (H256001-01)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	**0.067**	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	**0.075**	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	GC-NC1
Total Xylenes*	**0.481**	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	GC-NC1
Total BTEX	**0.622**	0.300	09/26/2025	ND					GC-NC1

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	**80.0**	16.0	09/26/2025	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*	**16.6**	10.0	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	**210**	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	**26.5**	10.0	09/26/2025	ND					

Surrogate: 1-Chlorooctane *97.7 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *99.3 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 01 1 (H256001-02)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	**0.077**	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	**0.304**	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	GC-NC1
Total BTEX	**0.381**	0.300	09/26/2025	ND					GC-NC1

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

Surrogate: 1-Chlorooctane *93.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *92.9 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 01 4 (H256001-03)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.2 %* *70.4-141*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/26/2025	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	09/26/2025	ND	198	98.9	200	0.206	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	212	106	200	0.703	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

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

Surrogate: 1-Chlorooctadecane *92.4 %* *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

GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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

Page 1 of 1

Company Name:	Ensolum, LLC	**BILL TO**	
Project Manager:	Tracy Hillard	**P.O. #:**	
Address:	601 N Marienfeld Street, Suite 400	**Company:**	XTO Energy, Inc
City:	Midland **State:** TX **Zip:** 79701	**Attn:**	Colton Brown
Phone #:	575-937-3906 **Fax #:**	**Address:**	3104 E Greene St
Project #:	03C1558744 **Project Owner:** XTO	**City:**	Carlsbad
Project Name:	JRU DI 7 -SPILLS	**State:** NM **Zip:**	88220
Project Location:	32.337522, -103.818163	**Phone #:**	
Sampler Name:	Evan Roe	**Fax #:**	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH 8015 M/D	BTEX 8021B	Chloride SM4500
H256000 1																		
1	PH 01	0.5	G	1			✓					✓		09/24/2025	1206	✓	✓	✓
2	PH 01	1	G	1			✓					✓		09/24/2025	1210	✓	✓	✓
3	PH 01	4	G	1			✓					✓		09/24/2025	1240	✓	✓	✓

Relinquished By:	**Date:** 9.25.25	**Received By:**	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Evan Roe	**Time:** 1355	S Rodriguez	**All Results are emailed. Please provide Email address:** THillard@ensolum.com, KThomason@ensolum.com, BBelill@ensolum.com, TMorrissey@ensolum.com
Relinquished By:	**Date:**	**Received By:**	**REMARKS:** Incident Number: nAPP2525557554
	Time:		Cost Center: 2256891001 GCFM: 48605000

Delivered By: (Circle One) Sampler - UPS - Bus - Other: FORM-006 R 3.6 02/12/25	**Observed Temp. °C** 0.4 **Corrected Temp. °C** 0.7	**Sample Condition** Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	**CHECKED BY: (Initials)** SR	**Turnaround Time:** Standard ☐ Rush ✓ 48h Thermometer ID #140 Correction Factor +0.3°C	**Bacteria (only) Sample Condition** Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

CARDINAL Laboratories

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

September 29, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 09/25/25 13:55.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 01 5 (H256002-01)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	**0.336**	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	GC-NC1
Total BTEX	**0.336**	0.300	09/26/2025	ND					GC-NC1

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	**48.0**	16.0	09/26/2025	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	09/26/2025	ND	194	96.8	200	1.32	
DRO >C10-C28*	**101**	10.0	09/26/2025	ND	204	102	200	5.34	
EXT DRO >C28-C36	**12.9**	10.0	09/26/2025	ND					

Surrogate: 1-Chlorooctane *88.3 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *90.6 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 01 7 (H256002-02)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	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	<16.0	16.0	09/26/2025	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	09/26/2025	ND	194	96.8	200	1.32	
DRO >C10-C28*	<10.0	10.0	09/26/2025	ND	204	102	200	5.34	
EXT DRO >C28-C36	<10.0	10.0	09/26/2025	ND					

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

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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

Page 1 of 1

Company Name:	Ensolum, LLC
Project Manager:	Tracy Hillard
Address:	601 N Marienfeld Street, Suite 400
City:	Midland State: TX Zip: 79701
Phone #:	575-937-3906 Fax #:
Project #:	03C1558744 Project Owner: XTO
Project Name:	JRU DI 7 -SPILLS
Project Location:	32.337522, -103.818163
Sampler Name:	Evan Roe

BILL TO

P.O. #:	
Company:	XTO Energy, Inc
Attn:	Colton Brown
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.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015 M/D	BTEX 8021B	Chloride SM4500
H25100021	PH 01	5	G	1			✓					✓		09/24/2025	1242	✓	✓	✓
2	PH 01	7	G	1			✓					✓		09/24/2025	1250	✓	✓	✓

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: 9.25.25	Received By:	
	Time: 1355		
Relinquished By:	Date:	Received By:	
	Time:		

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

All Results are emailed. Please provide Email address:
THillard@ensolum.com, KThomason@ensolum.com
BBelill@ensolum.com, TMorrissey@ensolum.com

REMARKS:
Incident Number: nAPP2525557554
Cost Center: 2256891001
GCFM: 48605000

Delivered By: (Circle One)	Observed Temp. °C 0.4	Sample Condition Cool: ☐ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.7	Intact: ☐ Yes ☐ No	

FORM-006 R 3.6 02/12/25

Turnaround Time: Standard ☐ Rush ✓ 48h

Thermometer ID #140
Correction Factor +0.3°C

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

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

CARDINAL Laboratories

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

September 29, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 09/25/25 13:55.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 02 0.5 (H256004-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**8.00**	0.500	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	**85.0**	0.500	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	**31.8**	0.500	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	**252**	1.50	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	**377**	3.00	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *135 %* *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	09/26/2025	ND	416	104	400	0.00	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**6120**	50.0	09/29/2025	ND	194	96.8	200	1.32	
DRO >C10-C28*	**11200**	50.0	09/29/2025	ND	204	102	200	5.34	
EXT DRO >C28-C36	**1540**	50.0	09/29/2025	ND					

Surrogate: 1-Chlorooctane *510 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *230 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 02 2 (H256004-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.598**	0.500	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	**11.3**	0.500	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	**5.35**	0.500	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	**43.0**	1.50	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	**60.3**	3.00	09/26/2025	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	09/26/2025	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*	**910**	10.0	09/26/2025	ND	194	96.8	200	1.32	
DRO >C10-C28*	**2710**	10.0	09/26/2025	ND	204	102	200	5.34	
EXT DRO >C28-C36	**374**	10.0	09/26/2025	ND					

Surrogate: 1-Chlorooctane *113 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *123 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	09/25/2025	Sampling Date:	09/24/2025
Reported:	09/29/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.337522, -103.818163		

Sample ID: PH 02 4 (H256004-03)

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	09/26/2025	ND	2.02	101	2.00	0.847	
Toluene*	<0.050	0.050	09/26/2025	ND	2.04	102	2.00	0.722	
Ethylbenzene*	<0.050	0.050	09/26/2025	ND	2.00	99.8	2.00	0.648	
Total Xylenes*	<0.150	0.150	09/26/2025	ND	5.90	98.4	6.00	0.284	
Total BTEX	<0.300	0.300	09/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *70.4-141*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/26/2025	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	09/26/2025	ND	194	96.8	200	1.32	
DRO >C10-C28*	**79.5**	10.0	09/26/2025	ND	204	102	200	5.34	
EXT DRO >C28-C36	**18.6**	10.0	09/26/2025	ND					

Surrogate: 1-Chlorooctane *87.2 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *88.6 %* *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

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.
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

Page 1 of 1

Company Name:	Ensolum, LLC
Project Manager:	Tracy Hillard
Address:	601 N Marienfeld Street, Suite 400
City:	Midland **State:** TX **Zip:** 79701
Phone #:	575-937-3906 **Fax #:**
Project #:	03C1558744 **Project Owner:** XTO
Project Name:	JRU DI 7 -SPILLS
Project Location:	32.337522, -103.818163
Sampler Name:	Evan Roe

BILL TO

P.O. #:	
Company:	XTO Energy, Inc
Attn:	Colton Brown
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.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015 M/D	BTEX 8021B	Chloride SM4500
H256004																		
1	PH 02	0.5	G	1			✓					✓		09/24/2025	1342	✓	✓	✓
2	PH 02	2	G	1			✓					✓		09/24/2025	1349	✓	✓	✓
3	PH 02	4	G	1			✓					✓		09/24/2025	1407	✓	✓	✓

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:** 9.25.25	**Received By:**
	Time: 1355	
Relinquished By:	**Date:**	**Received By:**
	Time:	

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

All Results are emailed. Please provide Email address:
THillard@ensolum.com, KThomason@ensolum.com
BBelill@ensolum.com, TMorrissey@ensolum.com

REMARKS:
Incident Number: nAPP2525557554
Cost Center: 2256891001
GCFM: 48605000

Delivered By: (Circle One)	**Observed Temp. °C** 0.4	**Sample Condition** Cool Intact	**CHECKED BY: (Initials)**
Sampler - UPS - Bus - Other:	**Corrected Temp. °C** 0.7	☐ Yes ☐ Yes ☐ No ☐ No	

Turnaround Time: Standard ☐ Rush ✓ 48h

Thermometer ID #140
Correction Factor +0.3°C

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

FORM-006 R 3.6 02/12/25

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

CARDINAL Laboratories

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

November 03, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 10/30/25 12:10.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/30/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: FS01 5' (H256840-01)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	<0.050	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	<0.050	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	<0.150	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	
Total BTEX	<0.300	0.300	10/31/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *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	<16.0	16.0	10/31/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	<10.0	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	<10.0	10.0	11/01/2025	ND					

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

Surrogate: 1-Chlorooctadecane *84.6 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/30/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: FS03 5' (H256840-02)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	<0.050	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	<0.050	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	<0.150	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	
Total BTEX	<0.300	0.300	10/31/2025	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	<16.0	16.0	10/31/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	<10.0	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	<10.0	10.0	11/01/2025	ND					

Surrogate: 1-Chlorooctane *97.4 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *92.0 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/30/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: SW01 0-1' (H256840-03)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	<0.050	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	<0.050	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	<0.150	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	
Total BTEX	<0.300	0.300	10/31/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *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	<16.0	16.0	10/31/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	<10.0	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	<10.0	10.0	11/01/2025	ND					

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

Surrogate: 1-Chlorooctadecane *93.8 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/30/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: SW02 0-5' (H256840-04)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	<0.050	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	<0.050	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	<0.150	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	
Total BTEX	<0.300	0.300	10/31/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *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	<16.0	16.0	10/31/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	<10.0	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	<10.0	10.0	11/01/2025	ND					

Surrogate: 1-Chlorooctane *109 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *102 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/30/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: SW03 0-5' (H256840-05)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	<0.050	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	<0.050	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	<0.150	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	
Total BTEX	<0.300	0.300	10/31/2025	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	<16.0	16.0	10/31/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	<10.0	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	<10.0	10.0	11/01/2025	ND					

Surrogate: 1-Chlorooctane *105 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *103 %* *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: Ensolum, LLC	**BILL TO**
Project Manager: Tracy Hillard	P.O. #:
Address: 601 N Marienfeld Street, Suite 400	Company: XTO Energy, Inc
City: Midland State: TX Zip: 79701	Attn: Dale woodall
Phone #: 575-937-3906 Fax #:	Address: 3104 E Greene St
Project #: 03C1558744 Project Owner: XTO Energy	City: Carlsbad
Project Name: JRU DI 7 - Spill	State: NM Zip: 88220
Project Location: 32.337511,-103.817885	Phone #:
Sampler Name: Jesse Dorman	Fax #:

FOR LAB USE ONLY Lab I.D	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH 8015	BTEX 8021	Chloride 4500
H256840																		
1	FS01	5'	C	1			X					X		10/30/25	930	X	X	X
2	FS03	5'	C	1			X					X			800			
3	SW01	0-1'	C	1			X					X			822			
4	SW02	0-1'	C	1			X					X			840			
5	SW03	↓	C	1			X					X			851			

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.

CS - 0402401K - all

Relinquished By:	Date: 10.30.25 Time: 1210	Received By:	Verbal Result: ☐Yes ☐No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: JReich@ensolum.com, BBelill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com, KThomason@ensolum.com, Jdorman@ensolum.com
			REMARKS: Incident Number: NAPP2525557554 Cost Center:2256891001 GFCM: 48605000
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.9 Corrected Temp. °C 4.2	Sample Condition Cool: Yes / Intact: Yes; No / No	CHECKED BY: (Initials)
			Turnaround Time: Standard / Rush #140 Thermometer ID #113 Correction Factor -0.5°C +0.3 Bacteria (only) Sample Condition Cool: Yes / No Intact: Yes / No Observed Temp. °C Corrected Temp. °C

48hr TAT starts 10/30/25

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

November 03, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 10/30/25 12:10.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/30/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: CS01 .5' (H256841-01)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	**0.200**	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	**0.226**	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	**1.74**	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	GC-NC1
Total BTEX	**2.17**	0.300	10/31/2025	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *137 %* *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	**112**	16.0	10/31/2025	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**36.7**	10.0	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	**195**	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	**110**	10.0	11/01/2025	ND					

Surrogate: 1-Chlorooctane *112 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *109 %* *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

GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name: Ensolum, LLC		**P.O. #:**	
Project Manager: Tracy Hillard		**Company:** XTO Energy, Inc	
Address: 601 N Marienfeld Street, Suite 400		**Attn:** Dale woodall	
City: Midland	**State:** TX **Zip:** 79701	**Address:** 3104 E Greene St	
Phone #: 575-937-3906	**Fax #:**	**City:** Carlsbad	
Project #: 03C1558744	**Project Owner:** XTO Energy	**State:** NM **Zip:** 88220	
Project Name: JRU DI 7 - Spill		**Phone #:**	
Project Location: 32.337511,-103.817885		**Fax #:**	
Sampler Name: Jesse Dorman			

ANALYSIS REQUEST

Lab I.D (FOR LAB USE ONLY)	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
H25L841 1	CS01	.5	C	1			✓					✓		10/30/25	915	✓	✓	✓

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.

CS-0402401K

Relinquished By: [signature] **Date:** 10-30-25 **Time:** 1210 **Received By:** [signature]

Relinquished By: **Date:** **Time:** **Received By:**

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

Observed Temp. °C 3.9 Corrected Temp. °C 4.2

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

CHECKED BY: (Initials) TO.

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

All Results are emailed. Please provide Email address: BBelill@ensolum.com, TMorrissey@ensolum.com, JReich@ensolum.com, THillard@ensolum.com, KThomason@ensolum.com, Jdorman@ensolum.com

REMARKS: Incident Number: NAPP2525557554
Cost Center:2256891001
GFCM: 48605000

Turnaround Time: Standard ☐ Rush ☑ 48h CS

Thermometer ID #113 Correction Factor -0.5°C +0.3°C TO. 10/30/25

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

FORM-006 R 3.2 10/07/21

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

Page 4 of 4

CARDINAL Laboratories

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

November 03, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 10/30/25 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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	10/30/2025	Sampling Date:	10/29/2025
Reported:	11/03/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: FS02 1' (H256843-01)

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	10/31/2025	ND	1.82	91.1	2.00	0.218	
Toluene*	<0.050	0.050	10/31/2025	ND	1.88	93.8	2.00	1.88	
Ethylbenzene*	<0.050	0.050	10/31/2025	ND	1.89	94.3	2.00	2.95	
Total Xylenes*	<0.150	0.150	10/31/2025	ND	5.94	99.0	6.00	2.80	
Total BTEX	<0.300	0.300	10/31/2025	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/31/2025	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	11/01/2025	ND	223	111	200	1.98	
DRO >C10-C28*	<10.0	10.0	11/01/2025	ND	239	120	200	1.26	
EXT DRO >C28-C36	<10.0	10.0	11/01/2025	ND					

Surrogate: 1-Chlorooctane *109 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *104 %* *39.9-141*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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: Ensolum, LLC	**BILL TO**
Project Manager: Tracy Hillard	P.O. #:
Address: 601 N Marienfeld Street, Suite 400	Company: XTO Energy, Inc
City: Midland State: TX Zip: 79701	Attn: Dale woodall
Phone #: 575-937-3906 Fax #:	Address: 3104 E Greene St
Project #: 03C1558744 Project Owner: XTO Energy	City: Carlsbad
Project Name: JRU DI 7 - Spill	State: NM Zip: 88220
Project Location: 32.337511,-103.817885	Phone #:
Sampler Name: Jesse Dorman	Fax #:

FOR LAB USE ONLY					MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST													
Lab I.D	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500											
H256843-1	FS02	1'	C	1			✓					✓		10/27/25	10:44	✓	✓	✓											

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.

CS-0402401K

Relinquished By:	Date: 10.30.25 Time: 1400	Received By:	Verbal Result: ☐Yes ☐No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: BBelill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com, KThomason@ensolum.com JReich@ensolum.com Jdorman@ensolum.com
			REMARKS: Incident Number: NAPP2525557554 Cost Center:2256891001 GFCM: 48605000
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.4 Corrected Temp. °C 3.7	Sample Condition Cool ☐Yes ☐No Intact ☑Yes ☐No	CHECKED BY: (Initials)
			Turnaround Time: Standard ☐ Rush ☑ Thermometer ID #113 Correction Factor -0.3°C
			Bacteria (only) Sample Condition Cool ☐Yes ☐No Intact ☐Yes ☐No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

November 14, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: JRU DI 7

Enclosed are the results of analyses for samples received by the laboratory on 11/13/25 13:56.

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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	11/13/2025	Sampling Date:	11/12/2025
Reported:	11/14/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: FS04 1' (H257144-01)

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	11/13/2025	ND	1.91	95.6	2.00	0.848	
Toluene*	<0.050	0.050	11/13/2025	ND	2.00	100	2.00	0.271	
Ethylbenzene*	<0.050	0.050	11/13/2025	ND	1.90	95.2	2.00	0.605	
Total Xylenes*	<0.150	0.150	11/13/2025	ND	5.68	94.6	6.00	0.0841	
Total BTEX	<0.300	0.300	11/13/2025	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	**96.0**	16.0	11/14/2025	ND	464	116	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	11/13/2025	ND	190	95.1	200	3.31	
DRO >C10-C28*	**28.4**	10.0	11/13/2025	ND	189	94.6	200	6.66	
EXT DRO >C28-C36	<10.0	10.0	11/13/2025	ND					

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

Surrogate: 1-Chlorooctadecane *85.3 %* *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:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	11/13/2025	Sampling Date:	11/12/2025
Reported:	11/14/2025	Sampling Type:	Soil
Project Name:	JRU DI 7	Sampling Condition:	Cool & Intact
Project Number:	03C1558744 (SPILL)	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.337511, -103.817885		

Sample ID: SW04 0-1' (H257144-02)

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	11/13/2025	ND	1.91	95.6	2.00	0.848	
Toluene*	<0.050	0.050	11/13/2025	ND	2.00	100	2.00	0.271	
Ethylbenzene*	<0.050	0.050	11/13/2025	ND	1.90	95.2	2.00	0.605	
Total Xylenes*	<0.150	0.150	11/13/2025	ND	5.68	94.6	6.00	0.0841	
Total BTEX	<0.300	0.300	11/13/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *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	**256**	16.0	11/14/2025	ND	464	116	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	11/13/2025	ND	190	95.1	200	3.31	
DRO >C10-C28*	**30.9**	10.0	11/13/2025	ND	189	94.6	200	6.66	
EXT DRO >C28-C36	<10.0	10.0	11/13/2025	ND					

Surrogate: 1-Chlorooctane *88.5 %* *52.4-130*

Surrogate: 1-Chlorooctadecane *83.0 %* *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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1-1

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

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Tracy Hillard	**P.O. #:**
Address: 601 N Marienfeld Street, Suite 400	**Company:** XTO Energy, Inc
City: Midland **State:** TX **Zip:** 79701	**Attn:** Dale Woodall
Phone #: (575) 937-3906 **Fax #:**	**Address:** 3014 E Greene St
Project #: 03C1558744 **Project Owner:** XTO Energy, Inc.	**City:** Carlsbad
Project Name: JRU DI 7 - SPILLS	**State:** NM **Zip:** 88220
Project Location: 32.337511,-103.817885	**Phone #:**
Sampler Name: Trevor Wargo	**Fax #:**

FOR LAB USE ONLY					MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500											
H257144																													
1	FS04	1	C	1			✓					✓		11/12/25	13:26	↓	↓	↓											
2	SW04	0-1	↓	↓			✓					✓		↓	14:30	↓	↓	↓											

TDW

NO Labels

Relinquished By: Trevor Wargo	**Date:** 11-13-25 **Time:** 1356	**Received By:** Tamara Oldaker	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address: TWargo@ensolum.com** BBelill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com, KThomason@ensolum.com
			REMARKS: Incident Number:nAPP2525557554 Cost Center: 2256891001 GFCM: 48605000
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 2.6 **Corrected Temp. °C** 2.9	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)**
			Turnaround Time: 24h **Standard** ☐ **Rush** ☑ **Thermometer ID** #113 #140 **Correction Factor** -0.5°C +0.3° **Bacteria (only) Sample Condition** Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No **Observed Temp. °C** **Corrected Temp. °C**

T-0.11/13/25

FORM-006 R 3.2 10/07/21

ENSOLUM

APPENDIX F

Spill Volume Calculation

Location:	**JRU DI 7 CVB**	
Spill Date:	**9/10/2025**	
Incident #:		

Area 1		
Approximate Area =	827	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	6.00	bbls
Total Produced Water =		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 =	**6.00**	**bbls**
Total Produced Water =		**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**2.00**	**bbls**
Total Produced Water =		**bbls**

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 505746

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 505746
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2525557554**
Incident Name	**NAPP2525557554 JAMES RANCH UNIT DI 7 BATTERY @ L-06-23S-31E**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Received**

Location of Release Source *Please answer all the questions in this group.*	
Site Name	JAMES RANCH UNIT DI 7 BATTERY
Date Release Discovered	09/10/2025
Surface Owner	Federal

Incident Details *Please answer all the questions in this group.*	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release *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: Other | Valve | Crude Oil | Released: 6 BBL | Recovered: 2 BBL | Lost: 4 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A cow rubbed up against a ball valve handle causing a release of fluid onto the ground.

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 505746
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

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: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 09/12/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 505746
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

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)	*Not answered.*
What method was used to determine the depth to ground water	*Not answered.*
Did this release impact groundwater or surface water	*Not answered.*
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	*Not answered.*
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	*Not answered.*
An occupied permanent residence, school, hospital, institution, or church	*Not answered.*
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	*Not answered.*
Any other fresh water well or spring	*Not answered.*
Incorporated municipal boundaries or a defined municipal fresh water well field	*Not answered.*
A wetland	*Not answered.*
A subsurface mine	*Not answered.*
An (non-karst) unstable area	*Not answered.*
Categorize the risk of this well / site being in a karst geology	*Not answered.*
A 100-year floodplain	*Not answered.*
Did the release impact areas not on an exploration, development, production, or storage site	*Not answered.*

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	No
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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CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 505746
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Spill calcs and initial C141 are approved. Remediation closure is due no later than 90-days after discovery of the release, by 12/09/2025.	9/15/2025

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QUESTIONS

Action 553970

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 553970
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2525557554**
Incident Name	**NAPP2525557554 JAMES RANCH UNIT DI 7 BATTERY @ L-06-23S-31E**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**

Location of Release Source *Please answer all the questions in this group.*	
Site Name	JAMES RANCH UNIT DI 7 BATTERY
Date Release Discovered	09/10/2025
Surface Owner	Federal

Incident Details *Please answer all the questions in this group.*	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release *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: Other | Valve | Crude Oil | Released: 6 BBL | Recovered: 2 BBL | Lost: 4 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A cow rubbed up against a ball valve handle causing a release of fluid onto the ground.

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 553970
	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: 02/14/2026

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 553970
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between ½ and 1 (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	Between ½ and 1 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	None
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	464
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	892
GRO+DRO (EPA SW-846 Method 8015M)	804
BTEX (EPA SW-846 Method 8021B or 8260B)	5.3
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	09/24/2025
On what date will (or did) the final sampling or liner inspection occur	11/12/2025
On what date will (or was) the remediation complete(d)	11/12/2025
What is the estimated surface area (in square feet) that will be reclaimed	725
What is the estimated volume (in cubic yards) that will be reclaimed	94
What is the estimated surface area (in square feet) that will be remediated	725
What is the estimated volume (in cubic yards) that will be remediated	94
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 553970
	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: 02/14/2026
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 553970
	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: 553970
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**523773**
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	**2**
What was the sampling surface area in square feet	**400**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	725
What was the total volume (cubic yards) remediated	94
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	725
What was the total volume (in cubic yards) reclaimed	94
Summarize any additional remediation activities not included by answers (above)	Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no sensitive receptors were identified at the Site. A Karst survey indicated that the location is not in a low karst zone. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number nAPP2525557554.

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: 02/14/2026

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 553970
	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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 553970
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Remediation closure is approved.	2/24/2026
michael.buchanan	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	2/24/2026
michael.buchanan	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	2/24/2026
michael.buchanan	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	2/24/2026
michael.buchanan	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	2/24/2026
michael.buchanan	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	2/24/2026