ENSOLUM

April 30, 2025

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
James Ranch Unit DI 1A Battery
Incident Number NAPP2421529493
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request* for the James Ranch Unit DI 1A Battery (Site). This *Closure Request* includes the additional information requested in a denial by the New Mexico Oil Conservation Division (NMOCD) of a previously submitted *Deferral Request* submitted on January 27, 2025. In the denial, NMOCD expressed concern that the potential high karst designation of the Site posed an imminent risk to groundwater. As such, NMOCD requested a karst survey and an evaluation of the soil type and review of safe excavation distances. XTO is providing the additional information requested by NMOCD and, after evaluation of that information, requesting no further action for Incident Number NAPP2421529493.

BACKGROUND

The Site is located in Unit A, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.37996°, -103.88669°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 26, 2024, a corrosion on a 4-inch tester joint resulted in the release of 15 barrels (bbls) of produced water onto the pad surface adjacent to and underneath active production equipment and surface lines. No fluids were recovered. XTO reported the release to the NMOCD on August 9, 2024, and the release was assigned Incident Number NAPP2421529493.

Ensolum conducted delineation soil sampling within and around the release extent and results were presented in a *Remediation Work Plan* (*Work Plan)* submitted to the NMOCD on October 24, 2024. The *Work Plan* proposed excavation of an estimated 300 cubic yards of impacted soil and confirmation soil sampling. The *Work Plan* was approved by the NMOCD on October 29, 2024, with no conditions of approval.

The *Work Plan* detailed Site characterization according to 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). The Site characterization results were included in the previously submitted *Deferral Request* prepared for Incident Number NAPP2421529493. The *Deferral Request* report, which includes a copy of the *Work Plan*, is included in Appendix A. Based on the results of the Site characterization, the following NMOCD Table I Closure Criteria applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

As documented in the *Deferral Request,* impacted soil was excavated from the release area as indicated by delineation soil sample laboratory analytical results and in accordance with the approved *Work Plan*. Following removal of impacted soil to the maximum extent practicable (MEP), Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. The final excavation extent measured approximately 3,540 square feet. A total of approximately 300 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 and Landfill in Hobbs, New Mexico. One confirmation soil sample, CS01, was collected from a depth of 0.5 feet bgs from an area inaccessible due to active production equipment. Laboratory analytical results for CS01 indicated a chloride concentration that exceeded the Closure Criteria. Lateral delineation of the residual impacted soil was defined by delineation soil samples SS03 through SS08. Vertical delineation of residual impacted soil was defined by delineation soil samples PH01 and PH02 at 2 feet bgs. An estimated area of impacted soil left in place immediately adjacent to or below active production equipment measured approximately 100 square feet and a total of approximately 7.5 cubic yards of impacted soil remained in place.

On January 31, 2025, NMOCD denied the *Deferral Request* for Incident Number NAPP2421529493 for the following reasons:

> *Deferral denied. Pursuant to 19.15.29.12(C)22 NMAC, a deferral may be granted so long as the contamination is fully delineated and does not cause an imminent risk to human health, the environment, or groundwater.*
>
> *This site is located in a high karst potential occurrence zone and OCD has recently reevaluated karst potential zones and will not approve deferrals in these areas as high karst may cause an imminent risk to groundwater. The operator may choose to have karst surveys performed by a BLM approved karst/cave contractor, to determine if karst features are present at the site. A desktop survey, aerial/pedestrian survey, AND a geophysical survey must be performed. If no karst features are located during any of the surveys AND the geophysical survey shows no other indications of unstable ground, the closure criteria can be based on Table 1 Closure Criteria found in 19.15.29 NMAC.*
>
> *Sites located on BLM or State Land Office (SLO) owned surface will need surface owner approval.*
>
> *A certified civil engineer will need to evaluate the soil type and provide the minimum distance the excavation(s) needs to be from the tanks and how deep the excavation(s) can be prior to requesting a deferral. This document must be stamped by the engineer. Submit updated deferral request or remediation closure request to the OCD by 5/1/25.*

What follows is a summary of the investigations conducted to acquire the new information and a subsequent request for no further action at the Site based on the findings of the karst investigation.

ENGINEERING REVIEW

The Site was assessed by a person trained in Occupational Safety and Health Administration (OSHA) excavation and trench safety (Competent Person) under the consultation of a Registered Professional Engineer (RPE) licensed in the State of New Mexico. Soil type C was observed in the inaccessible area, a 12-foot by 9-foot section directly adjacent to and beneath active production equipment. Immediately adjacent to the deferred soil is an engineered separator and an engineered pipe rack.

Based on the Site conditions and following OSHA Excavation Standards, the RPE recommendation indicates excavation should not be completed within 18 feet of the edge of the separator or within 6 feet of the edge of the pipe rack. As such, the excavation extent completed to date, originally presented in the *Deferral Request*, includes the existing excavation sidewall which was already within that minimum distance, and based on the engineering calculations, the excavation should not be extended closer to the equipment or made deeper while maintaining the safety of all onsite personnel and the structural integrity of the active production equipment as determined by the RPE.

A detailed description of the review and calculations is included in the *Excavation Guidance Document* in Appendix B. The *Excavation Guidance Document* is stamped by an RPE licensed in the state of New Mexico.

KARST SURVEY RESULTS

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, which was confirmed to be greater than 110 feet bgs in a dry boring advanced approximately 1,000 feet from the Site.

Based on the results of the karst survey, a lack of sensitive receptors near the Site, and groundwater documented to be greater than 100 feet bgs, XTO proposes application of the following revised Closure Criteria, deemed appropriate based on new information obtained for this report:

- Benzene: 10 mg/kg
- BTEX: 50 mg/kg
- 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

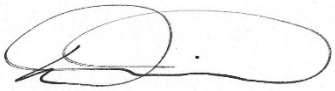
The detailed report provided by Southwest Geophysical Consulting is included in Appendix C.

CLOSURE REQUEST

The results of the karst survey confirm there is no imminent risk to groundwater at the Site based on the absence of any visible karst features through desktop and pedestrian surveys and absence of any anomalies observed through the geophysical survey to indicate voids. The absence of karst features beneath the Site indicates the subsurface is stable and there is no imminent threat to human health, the environment, or groundwater, which eliminates the sensitive receptor as it relates to the Site. As such, based on initial response efforts, removal of impacted soil to the MEP, and full delineation of the release to the strictest Closure Criteria, XTO requests remediation closure approval for Incident Number NAPP2421529493. Waste-containing soil identified in the inaccessible area will be removed at the time of final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC



Tacoma Morrissey
Associate Principal

Daniel R. Moir, PG (licensed in WY & TX)
Senior Managing Geologist

cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

Appendices:

Appendix A January 24, 2025 *Deferral Request Report*
Appendix B Excavation Guidance Document
Appendix C Environmental Karst Study Report

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APPENDIX A

January 24, 2025 *Deferral Request Report*

ENSOLUM

January 24, 2025

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

Re: Deferral Request
James Ranch Unit DI 1A Battery
Incident Number NAPP2421529493
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document excavation and soil sampling activities performed at the James Ranch Unit DI 1A Battery (Site). The purpose of the excavation and soil sampling activities, conducted in accordance with an approved *Remediation Work Plan* (*Work Plan*), was to address impacts to soil resulting from a release of produced water at the Site. XTO is submitting this *Deferral Request*, describing excavation activities that have occurred and requesting deferral of final remediation for Incident Number NAPP2421529493 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.37996°, -103.88669°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On July 26, 2024, a corrosion on a 4-inch tester joint resulted in the release of 15 barrels (bbls) of produced water onto the pad surface adjacent to and underneath active production equipment and surface lines. No fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on August 9, 2024, and the release was assigned Incident Number NAPP2421529493.

Ensolum conducted delineation sampling within and around the release extent and results are presented in the *Work Plan* submitted to the New Mexico Oil Conservation Division (NMOCD) on October 24, 2024. The *Work Plan* proposed excavation of an estimated 300 cubic yards of impacted soil and confirmation soil sampling. The *Work Plan* was approved by the NMOCD on October 29, 2024, with no conditions.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As documented in the approved *Work Plan*, 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): 100 mg/kg
- Chloride: 600 mg/kg

EXCAVATION SOIL SAMPLING ACTIVITIES

Ensolum personnel returned to the Site between November 1, and November 5, 2024, to oversee excavation activities in accordance with the approved *Work Plan*. Impacted soil was excavated from the release area as indicated by delineation soil sample laboratory analytical results. Excavation activities were performed using a trackhoe and transport vehicle. The excavation occurred on the well pad around and below active production equipment and surface lines. To direct excavation activities, Ensolum personnel screened soil for VOCs utilizing a calibrated photoionization detector (PID) and chlorides utilizing Hach® chloride QuanTab® test strips. In addition, one delineation soil sample, SS08, was collected from a depth of 0.5 feet bgs to assess the lateral extent of the release.

Following removal of impacted soil to the maximum extent possible, 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 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Excavation soil samples FS01 through FS18 were collected from the floor of the excavation from a depth of 2 feet bgs. Excavation sidewall soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from ground surface to 2 feet bgs. One confirmation soil sample, CS01, was collected from a depth of 0.5 feet bgs from the area inaccessable due to acitve production equipment. The final excavation extent and soil sample locations are presented on Figure 1. Photographic documentation of the excavation activities is presented on a Photographic Log in Appendix A.

The confirmation 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) located in Hobbs, New Mexico, for analysis of the following contaminants of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

The final excavation extent measured approximately 3,540 square feet. A total of approximately 300 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 and Landfill in Hobbs, New Mexico. Disposal manifests are included in Appendix B.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results from the additional delineation soil samples, SS08, indicated all COC concentrations were in compliance with Closure Criteria. Laboratory analytical results for all confirmation floor and sidewall soil samples collected from the final excavation extent indicated all COC concentrations were in compliance with Closure Criteria. Laboratory analytical results for CS01, collected from the inaccessible area, indicated chloride concentrations exceeded Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

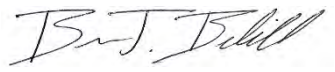
DEFERRAL REQUEST

Excavation activities were conducted at the Site as proposed in the *Work Plan* included in Appendix D. Impacted soil remains in the release extent where multiple surface pipelines and production equipment exist. The impacted soil contains chloride concentrations that exceed Closure Criteria. Lateral delineation of the residual impacted soil is defined by the delineation soil samples SS03 through SS08. Vertical delineation of residual impacted soil is defined by delineation soil samples PH01 and PH02 at 2 feet bgs. An estimated area of impacted soil left in place immediate adjacent to or below active production equipment measures approximately 100 square feet and a total of approximately 7.5 cubic yards of impacted soil remains in place. The estimated area of remaining impacted soil and referenced soil sample locations are presented in Figure 2. XTO is requesting deferral of final remediation in this area since excavation of the soil would require major facility deconstruction.

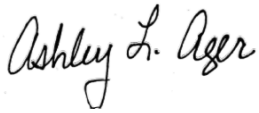
XTO does not believe deferment of the remaining 7.5 cubic yards of soil will result in imminent risk to human health, the environment, or groundwater and the impacted soil remaining in place is limited in areal and vertical extent. As such, XTO requests deferral of final remediation for Incident Number NAPP2421529493 until final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC



Benjamin J. Belill
Project Geologist



Ashley L. Ager, M.S., P.G.
Program Director

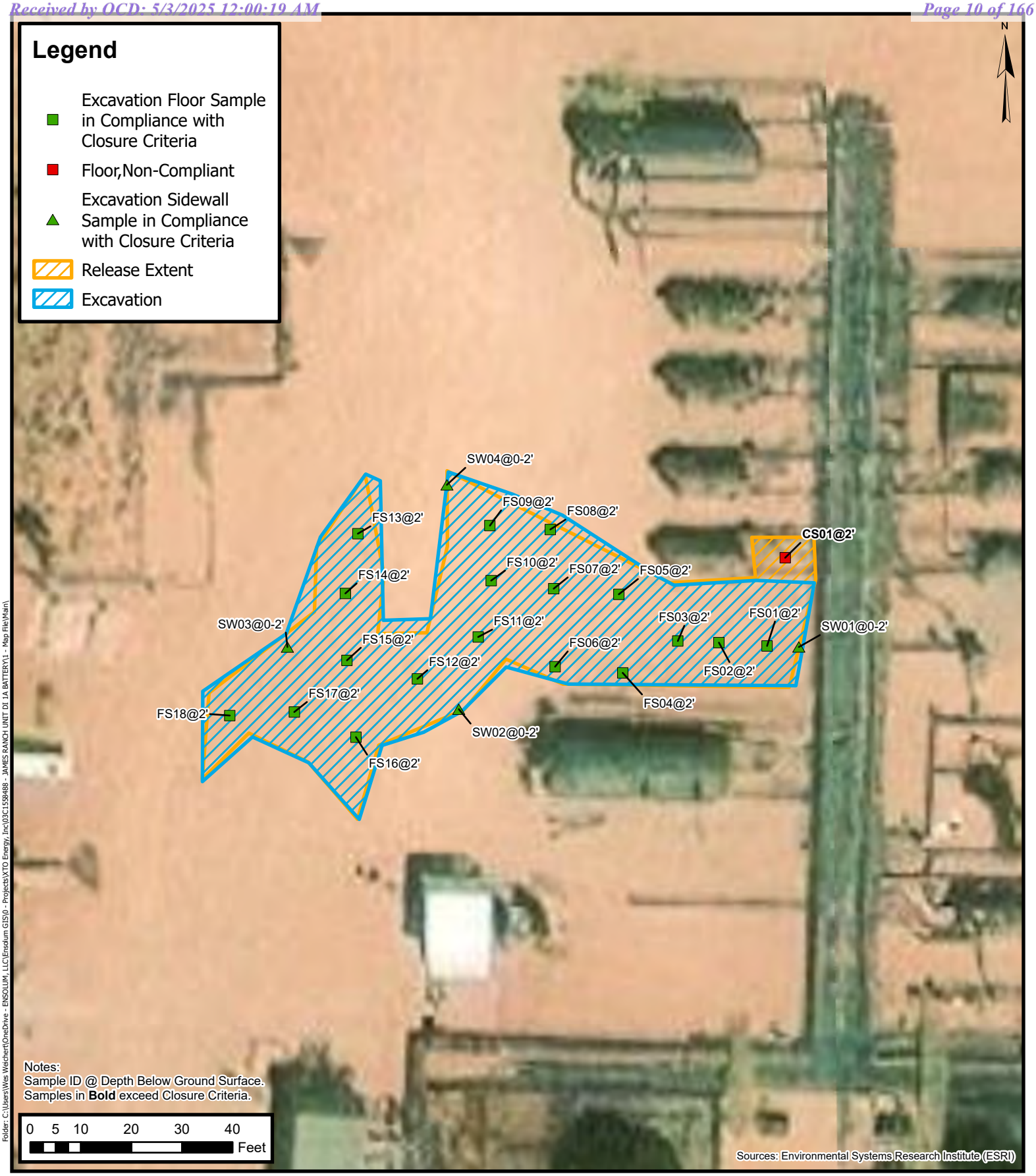
cc: Colton Brown, XTO
Kaylan Dirkx, XTO
Bureau of Land Management

Appendices:

Figure 1	Excavation Soil Sample Locations
Figure 2	Deferral Area Map
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Disposal Manifests
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	October 24, 2024 *Remediation Work Plan*

ENSOLUM

FIGURES



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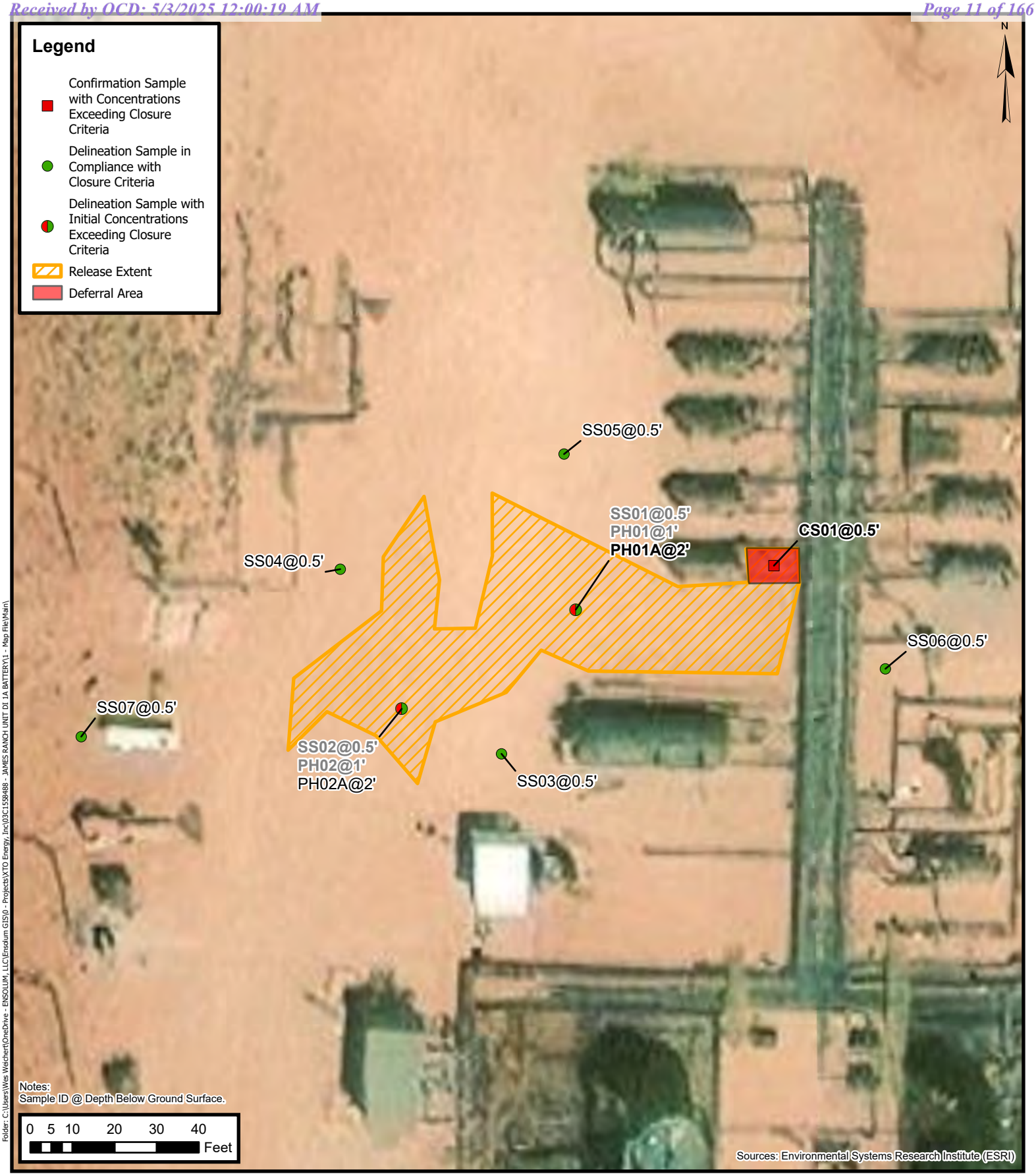
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
JAMES RANCH UNIT DI 1A BATTERY
Incident Number: NAPP2421529493
Unit A, Sec 21, T22S, R30E
Eddy Co, New Mexico, United States

FIGURE 1



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Environmental, Engineering and Hydrogeologic Consultants

Deferral Area Map

XTO Energy, Inc
JAMES RANCH UNIT DI 1A BATTERY
Incident Number: NAPP2421529493
Unit A, Sec 21, T22S, R30E
Eddy Co, New Mexico, United States

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JAMES RANCH UNIT DI 1A 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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
~~SS01~~	~~8/9/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~8,600~~
~~PH01~~	~~10/22/2024~~	~~1~~	~~<0.050~~	~~<0.300~~	~~<20.0~~	~~<10.0~~	~~<10.0~~	~~<20.0~~	~~<20.0~~	~~2,120~~
PH01A	10/22/2024	2	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	352
~~SS02~~	~~8/9/2024~~	~~0.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~7,730~~
~~PH02~~	~~10/22/2024~~	~~1~~	~~<0.050~~	~~<0.300~~	~~<20.0~~	~~<10.0~~	~~<10.0~~	~~<20.0~~	~~<20.0~~	~~1,520~~
PH02A	10/22/2024	2	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	80.0
SS03	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
SS04	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS05	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	8/9/2024	0.5	<0.050	<0.300	<10.0	77.4	<10.0	77.4	77.4	368
SS07	10/22/2024	0.5	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	240
SS08	1/21/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
Confirmation Soil Samples										
FS01	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	464
FS02	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
FS03	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS04	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS05	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
FS06	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS07	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	304
FS08	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
FS09	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
FS10	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS11	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS12	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS13	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS14	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS15	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS16	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48
FS17	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JAMES RANCH UNIT DI 1A 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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS18	11/5/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SW01	11/5/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
SW02	11/5/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW03	11/5/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SW04	11/5/2024	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
CS01	1/21/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**7,840**

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Grey text indicates soil samples removed by excavation.
Soil sample in bold indicate soil sample exceed closure criteria

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
NMAC: New Mexico Administrative Code

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APPENDIX A

Photographic Log

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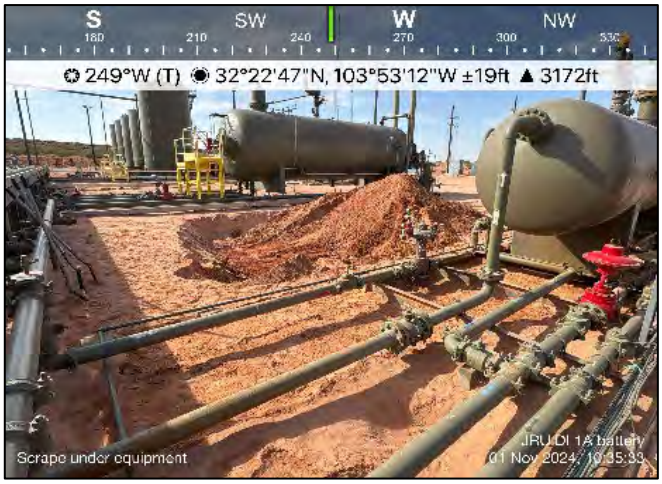
Photographic Log
XTO Energy, Inc
James Ranch Unit DI 1A Battery
NAPP2421529493



Photograph: 1 Date: 11/01/2024
Description: Excavation activities
View: West

Photograph: 2 Date: 11/05/2024
Description: Excavation activities
View: Southeast

Photograph: 3 Date: 11/05/2024
Description: Final excavation
View: East

Photograph: 4 Date: 11/18/2024
Description: Backfill
View: West

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APPENDIX B

Disposal Manifests

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- ~~6671~~ 911

Generator Manifest # XTO
Generator Name ~~Job 03C 155 8488~~
Address
City, State, Zip
Phone No.

Location of Origin JRU D 14 ETB
Lease/Well Name & No. Job 03C 155 8488
County 9291529493
API No. 30 1052551001
Rig Name & No.
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Waste Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	Belly Dump
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	20	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID Y - YARDS 20 E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name Sem Tex mex Trucking
Address
Phone No.
Transporter Ticket #

Driver's Name Peter
Print Name
Phone No.
Truck No. 109

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | 11 15 24 DELIVERY DATE | Peter Maser DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No. 38

Site Name/ Permit No. Halfway Facility / NM1-006
Address 6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220
Phone No. 575-392-6368

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

NAME (PRINT) | DATE | TITLE | SIGNATURE

-138
donc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 705469

Generator Manifest #
Generator Name XTO
Address
City, State, Zip
Phone No.

Location of Origin
Lease/Well Name & No. JRU DI 1A CTB V
County
API No. Job: 02C1553488 Incident: NAPP2421529497
Rig Name & No. CC: 16825100I
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	Billy Dumps
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

David Byrd — (PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name SemiTex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Gustavo Ruiz
Print Name
Phone No.
Truck No. #61

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

11-15-24 SHIPMENT DATE | DRIVER'S SIGNATURE | 11-15-24 DELIVERY DATE | DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No.

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
First Guage		
Second Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

NAME (PRINT) | DATE | TITLE | SIGNATURE

138
donc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

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R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Bya
Phone No.

GENERATOR

NO. HW- 70775

Generator Manifest # XTO
Generator Name
Address
City, State, Zip
Phone No.

Location of Origin Lease/Well
Name & No. DLA
County Eddy
API No. 30-015-44488
Rig Name & No. NMP20215294
AFE/PO No. 10255001

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)		
Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name Sem Tex mex
Address
Phone No. 432-209-4245
Transporter Ticket #

Driver's Name Gilbert Hannell
Print Name
Phone No.
Truck No. 38 Bethyl

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | DELIVERY DATE 11-5-21 | DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No.

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
First Guage		
Second Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

NAME (PRINT) | DATE | TITLE | SIGNATURE

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFEILD WASTE MANIFEST

(PLEASE PRINT)

Company Man Contact Information
Name David Byrd
Phone No. _____

GENERATOR

NO. AD-0014945

Generator Manifest #: XTO
Location of Origin Lease/Well: JRW 01 14
Generator Name
Name & No.: JUD: 03C155484 88
Address
County: Eddy
API No.: Incident NAPP2421529493
City, State, Zip
Rig Name & No.: CC: 618755 (JU)
Phone No.
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

		NON-INJECTABLE WATERS		OTHER EXEMPT E&P WASTE STREAMS
Oil Based Muds		Washout Water (Non-Injectable)		Belly
Oil Based Cuttings		Completion Fluid/Flow back (Non-Injectable)		
Water Based Muds		Produced Water (Non-Injectable)		
Water Based Cuttings		Gathering Line Water/Waste (Non-Injectable)		
Produced Formation Solids		INTERNAL USE ONLY		TOP SOIL & CALICHE SALES
Tank Bottoms		Truck Washout (exempt waste)	YES (NO)	QUANTITY _____ TOP SOIL CALICHE
E&P Contaminated Soil	✓			
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _____ *please select from **Non-Exempt Waste List** on back*

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is (Check the appropriate classification)

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFEILD: Emergency non-hazradous, non-oilfeild waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a desciption of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS NAME | DATE | SIGNATURE

TRANSPORTER

Transporter's Name: Sentry Mex
Address
Phone No.: (432) 209-4230
Transporter Ticket #
Driver's Name: Adrian Tinajero
Print Name: Adrian T.
Phone No.
Truck No.: 246045

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE 11/15/24 DRIVER'S SIGNATURE Adrian T. DELIVERY DATE 11/15/24 DRIVER'S SIGNATURE Adrian T.

DISPOSAL FACILITY

TRUCK TIME STAMP
IN: _____ OUT: _____

RECEIVING AREA
Name/No.

Site Name/ Permit No.: **Antelope Draw Facility - Permit #**
Phone No.: 575-236-1734
Address: 476 Battle Axe Rd. , Jal, NM 88252

NORM READINGS TAKEN? (Circle One) YES NO If YES, was reading > 50 micro roentgens? (circle one) YES NO

PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

NAME (PRINT) | DATE | TITLE | SIGNATURE

NM C-138 ORIGINAL Version 23.1

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Ayrd
Phone No.

GENERATOR

NO. HW- 717794

Generator Manifest #
Generator Name ~~Sam Tex Mex~~ XTO
Address
City, State, Zip
Phone No.

Location of Origin XTO
Lease/Well Name & No. JRU DI 1A - CTV
County Jo Inc. doc # 03C1558488
API No. NAPP2421529493
Rig Name & No. SC 108855/001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	Belly Dump
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	X	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE DATE SIGNATURE

TRANSPORTER

Transporter's Name Sam Tex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Ren. Garcia
Print Name
Phone No.
Truck No. 36

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

11-15-24 SHIPMENT DATE — DRIVER'S SIGNATURE — 11-18-24 DELIVERY DATE — DRIVER'S SIGNATURE

DISPOSAL FACILITY

TRUCK TIME STAMP IN: OUT:

RECEIVING AREA Name/No. 28

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES (NO)
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Sam Tex Mex — NAME (PRINT) — 11-18-24 — DATE — A/D-1 — TITLE — SIGNATURE

138
donc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717399

Generator Manifest # XTO
Location of Origin Lease/Well # 03C1558488
Generator Name
Address
Lease/Well Name & No. JRU D1 1A CTB
County Eddy
API No. NMAP2421529493
City, State, Zip
Rig Name & No. C.C. 108255001
Phone No.
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

		NON-INJECTABLE WATERS		OTHER EXEMPT E&P WASTE STREAMS
Oil Based Muds		Washout Water (Non-Injectable)		
Oil Based Cuttings		Completion Fluid/Flow Back (Non-Injectable)		
Water Based Muds		Produced Water (Non-Injectable)		
Water Based Cuttings		Gathering Line Water/Waste (Non-Injectable)		
Produced Formation Solids				
Tank Bottoms				
E&P Contaminated Soil	X	INTERNAL USE ONLY		TOP SOIL & CALICHE SALES
Gas Plant Waste		Truck Washout (exempt waste)	YES NO	QUANTITY 20 yds TOP SOIL CALICHE

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

Tad Cuesy (PRINT) AUTHORIZED AGENTS SIGNATURE | 11.15.24 DATE | SIGNATURE

TRANSPORTER

Transporter's Name Sem Tex Mex
Address
Phone No.
Transporter Ticket #
Driver's Name Tad Cuesy
Print Name
Phone No.
Truck No. 62

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | 11.18.24 DELIVERY DATE | DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No. 78

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

NAME (PRINT) | DATE | TITLE | SIGNATURE

138
onc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717401

Generator Manifest # XTO
Location of Origin 03155848
Lease/Well Name & No. JRU D1 1A CTB
Generator Name
Address
County Rio Arriba
API No. 30-039-24152949
City, State, Zip
Rig Name & No. CC 10825510001
Phone No.
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

		NON-INJECTABLE WATERS		OTHER EXEMPT E&P WASTE STREAMS
Oil Based Muds		Washout Water (Non-Injectable)		
Oil Based Cuttings		Completion Fluid/Flow Back (Non-Injectable)		
Water Based Muds		Produced Water (Non-Injectable)		
Water Based Cuttings		Gathering Line Water/Waste (Non-Injectable)		
Produced Formation Solids		INTERNAL USE ONLY		TOP SOIL & CALICHE SALES
Tank Bottoms		Truck Washout (exempt waste)	YES NO	QUANTITY 20 yds TOP SOIL CALICHE
E&P Contaminated Soil	X			
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

Tad Curry — (PRINT) AUTHORIZED AGENTS SIGNATURE
11/18/24 — DATE
SIGNATURE

TRANSPORTER

Transporter's Name SemTexMex
Address
Phone No.
Transporter Ticket #
Driver's Name Tad Curry
Print Name
Phone No.
Truck No. 62

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE — DRIVER'S SIGNATURE
11/18/24 — DELIVERY DATE
DRIVER'S SIGNATURE

DISPOSAL FACILITY

TRUCK TIME STAMP IN: OUT:

RECEIVING AREA Name/No. 28

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Anthony T — NAME (PRINT)
11/18/24 — DATE
TITLE
SIGNATURE

138
donc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

R360 ENVIRONMENTAL SOLUTIONS

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717398

Generator Manifest # XTO
Generator Name
Address
City, State, Zip
Phone No.

Location of Origin XTO 03055 8488
Lease/Well Name & No. TRU D I 1A CTB
County Eddy
API No. Incident nMAPP 2421529493
Rig Name & No. C.C. 108255 1001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)			
Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms			
E&P Contaminated Soil	✓	INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
Gas Plant Waste		Truck Washout (exempt waste) YES NO	QUANTITY 20yds TOP SOIL CALICHE

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

Tad Curry 11.18.24
(PRINT) AUTHORIZED AGENTS SIGNATURE DATE SIGNATURE

TRANSPORTER

Transporter's Name Sem Tex/Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Tad Curry
Print Name Tad Curry
Phone No. 3184995357
Truck No. 62

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE DRIVER'S SIGNATURE 11.18.24 DELIVERY DATE DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No. 8

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES (NO)
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
Est Guage		
End Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Raynaldo P 11/18/24 Agent
NAME (PRINT) DATE TITLE SIGNATURE

138
donc@northstarforms.com (877)499-0492

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R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 651612

Generator Manifest # XTO

Generator Name
Address
City, State, Zip
Phone No.

Location of Origin
Lease/Well Name & No. JRU D 11A CIB
County D3C 155 3488
API No. 30 025 29493
Rig Name & No. 10 [illegible] 10825510 01
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Waste Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	Belly Dump
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	20	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name Sem Tex Mex Trucking
Address
Phone No.
Transporter Ticket #

Driver's Name Peter
Print Name
Phone No.
Truck No. 102

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | 11 18 24 DELIVERY DATE | DRIVER'S SIGNATURE

DISPOSAL FACILITY

TRUCK TIME STAMP IN: OUT:

RECEIVING AREA Name/No. 2E

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES (NO)
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): (ACCEPTED) DENIED If denied, why?

NAME (PRINT) | DATE | TITLE | SIGNATURE

138
donc@northstarforms.com (877)499-0492

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R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717074

Generator Manifest #
Generator Name XTO
Address
City, State, Zip
Phone No.

Location of Origin
Lease/Well Name & No. JRU D1 1A CTB
County 0345553488
API No. NAPP2421529493
Rig Name & No. cc: 1083551001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	Belly dump
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	✓	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name SemTex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Cornelio
Print Name
Phone No.
Truck No. 02

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | DELIVERY DATE 11-15-24 | DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No. 06

Site Name/ Permit No. Halfway Facility / NM1-006
Address 6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220
Phone No. 575-392-6368

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one) ACCEPTED DENIED If denied, why?

Alycandra F. | 11/18/24 | AM |

NAME (PRINT) | DATE | TITLE | SIGNATURE

138
donc@northstarforms.com (877)499-0492

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R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717394

Generator Manifest #		Location of Origin	
Generator Name	XTO	Lease/Well Name & No.	TRU DI 1A CTB
Address		County	03C1558488
		API No.	NAPP 2421529493
City, State, Zip		Rig Name & No.	CC: 1083551001
Phone No.		AFE/PO No.	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

		NON-INJECTABLE WATERS		OTHER EXEMPT E&P WASTE STREAMS
Oil Based Muds		Washout Water (Non-Injectable)		
Oil Based Cuttings		Completion Fluid/Flow Back (Non-Injectable)		
Water Based Muds		Produced Water (Non-Injectable)		
Water Based Cuttings		Gathering Line Water/Waste (Non-Injectable)		Bellydump
Produced Formation Solids		INTERNAL USE ONLY		TOP SOIL & CALICHE SALES
Tank Bottoms	/	Truck Washout (exempt waste) YES NO		QUANTITY / TOP SOIL / CALICHE
E&P Contaminated Soil				
Gas Plant Waste				

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other ________ *please select from **Non-Exempt Waste List** on back*

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 (Y - YARDS) E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE ________ DATE ________ SIGNATURE ________

TRANSPORTER

Transporter's Name	SemTexMex	Driver's Name	Cornelio
Address		Print Name	
Phone No.		Phone No.	
Transporter Ticket #		Truck No.	02

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE ________ DRIVER'S SIGNATURE ________ DELIVERY DATE 11-8-24 DRIVER'S SIGNATURE [signature]

DISPOSAL FACILITY

TRUCK TIME STAMP IN: ________ OUT: ________

RECEIVING AREA Name/No. 28

Site Name/Permit No. **Halfway Facility / NM1-006** Phone No. **575-392-6368**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**

NORM READINGS TAKEN? (Circle One) YES (NO) If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): (ACCEPTED) DENIED If denied, why?

NAME (PRINT) DATE 11/8/24 TITLE SIGNATURE

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717393

Generator Manifest #
Generator Name XTO
Address
City, State, Zip
Phone No.

Location of Origin
Lease/Well Name & No. JRUDI 1A CTB
County 03C1558488
API No. NAPP 2421539493
Rig Name & No. CC1082551001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		**NON-INJECTABLE WATERS**		**OTHER EXEMPT E&P WASTE STREAMS**	
Oil Based Cuttings		Washout Water (Non-Injectable)		Belly dump	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)			
Water Based Cuttings		Produced Water (Non-Injectable)			
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)			
Tank Bottoms		**INTERNAL USE ONLY**		**TOP SOIL & CALICHE SALES**	
E&P Contaminated Soil	✓	Truck Washout (exempt waste) YES NO		QUANTITY	TOP SOIL CALICHE
Gas Plant Waste					

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other ____ *please select from **Non-Exempt Waste List** on back*

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 (Y - YARDS) E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE DATE SIGNATURE

TRANSPORTER

Transporter's Name SemTex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Cornelio
Print Name
Phone No.
Truck No. 02

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE DRIVER'S SIGNATURE 11-18-24 DELIVERY DATE DRIVER'S SIGNATURE

TRUCK TIME STAMP
IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA
Name/No.

Site Name/Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES (NO)
PASS THE PAINT FILTER TEST? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): (ACCEPTED) DENIED If denied, why?

NAME (PRINT) 11/18/24 DATE TITLE SIGNATURE

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717807

Generator Manifest #
Generator Name XTO
Address
City, State, Zip
Phone No.

Location of Origin
Lease/Well Name & No. JRU D1 1A CTB
County
API No. Job#0326558488 NAPP2421579493
Rig Name & No. CC:10325510O1
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	Belly dump
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	✓	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name SemTex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Cornelio
Print Name
Phone No.
Truck No. 02

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | DELIVERY DATE 11-18-24 | DRIVER'S SIGNATURE

TRUCK TIME STAMP IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA Name/No. 26

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
Last Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Alejandra P | 11/18/24 | AGM | |

NAME (PRINT) | DATE | TITLE | SIGNATURE

138
donc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717716

Generator Manifest #
Generator Name: XTO
Address
City, State, Zip
Phone No.

Location of Origin: XTO
Lease/Well Name & No.: JRU D1A-CTB
County
API No.: Incident Nos. 03C1558488 NAPP2421529493
Rig Name & No.: CC 108255/001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	Belly Dump
Water Based Cuttings		Produced Water (Non-Injectable)	
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil	Y	Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name: Sam Tex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name: Rene Garcia
Print Name
Phone No.
Truck No.: 36

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

11-18-24 SHIPMENT DATE | DRIVER'S SIGNATURE | 11-18-24 DELIVERY DATE | DRIVER'S SIGNATURE

TRUCK TIME STAMP IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA Name/No. 28

Site Name/ Permit No.: Halfway Facility / NM1-006
Address: 6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220
Phone No.: 575-392-6368

NORM READINGS TAKEN? (Circle One) YES (NO)
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) (YES) NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Alejandra P — NAME (PRINT) | 11/18/24 — DATE | APM — TITLE | AP — SIGNATURE

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White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717719

Generator Manifest #
Generator Name XTO
Address
City, State, Zip
Phone No.

Location of Origin XTO
Lease/Well Name & No. JRV DI/A- CTB
County Lea
API No. 30-025-58488 NAPP 2421529493
Rig Name & No. CC 1087551001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	Belly Dump
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms		INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil		Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste	X		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☒ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name Scan Tex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Ken Cook
Print Name
Phone No.
Truck No. 14

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

11-18-24 SHIPMENT DATE | DRIVER'S SIGNATURE | 11-18-24 DELIVERY DATE | DRIVER'S SIGNATURE

TRUCK TIME STAMP IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA Name/No. 20

Site Name/ Permit No. Halfway Facility / NM1-006
Address 6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220
Phone No. 575-392-6368

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
1st Guage		
2nd Guage		
Received		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

Sam Y. NAME (PRINT) | 11/18/24 DATE | Agent TITLE | SIGNATURE

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onc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

August 21, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/15/24 13:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 01 0.5' (H244957-01)

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	08/17/2024	ND	2.07	104	2.00	2.84	
Toluene*	<0.050	0.050	08/17/2024	ND	1.98	99.1	2.00	2.26	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	1.97	98.5	2.00	1.54	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	5.84	97.3	6.00	1.46	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8600**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *75.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.1 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 02 0.5' (H244957-02)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7730**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *81.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.7 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 03 0.5' (H244957-03)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *74.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.1 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 04 0.5' (H244957-04)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *78.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.1 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 05 0.5' (H244957-05)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *77.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.7 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 06 0.5' (H244957-06)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	**77.4**	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *86.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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: 3122 National Parks Hwy	**Company:** XTO Energy Inc.
City: Carlsbad **State:** NM **Zip:** 88220	**Attn:** Amy Ruth
Phone #: 575-937-3906 **Fax #:**	**Address:** 3104 E. Green St.
Project #: : 03C1558488 **Project Owner:** XTO	**City:** Carlsbad
Project Name: JRU DI 1A Battery	**State:** NM **Zip:** 88220
Project Location: 32.37996, -103.88669	**Phone #:**
Sampler Name: Jesse Dorman	**Fax #:**

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H244957	SS01	0.5'	G	1			✓					✓		8/9/24	0940	✓	✓	✓
2	SS02	↓	↓	↓			↓					↓			0945	✓	✓	✓
3	SS03														10:05	✓	✓	✓
4	SS04														10:10	✓	✓	✓
5	SS05														10:20	✓	✓	✓
6	SS06		↓	↓			↓					↓			10:25	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or 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:** 8.15.24 **Time:** 1305	**Received By:**	**Verbal Result:** ☐ Yes ☑ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** THillard@ensolum.com TMorrissey@ensolum.com,
			REMARKS: Cost Center: 1082551001 Incident ID: nAPP2421529493

Delivered By: (Circle One)	Observed Temp. °C 39	**Sample Condition** Cool ☑ Yes ☐ No Intact ☐ Yes ☑ No	**CHECKED BY: (Initials)**	**Turnaround Time:** Standard ☑ Rush ☐ **Bacteria (only) Sample Condition** Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 33		KPP	Thermometer ID #113 Correction Factor -0.5°C -0.1°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

October 23, 2024

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/22/24 15:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH01 1' (H246446-01)

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	10/22/2024	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	10/22/2024	ND	2.00	99.9	2.00	2.61	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	2.02	101	2.00	2.44	
Total Xylenes*	<0.150	0.150	10/22/2024	ND	6.09	102	6.00	2.01	
Total BTEX	<0.300	0.300	10/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2120**	16.0	10/23/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *97.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.8 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH01A 2' (H246446-02)

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	10/22/2024	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	10/22/2024	ND	2.00	99.9	2.00	2.61	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	2.02	101	2.00	2.44	
Total Xylenes*	<0.150	0.150	10/22/2024	ND	6.09	102	6.00	2.01	
Total BTEX	<0.300	0.300	10/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	10/23/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *94.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.4 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH02 1' (H246446-03)

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	10/23/2024	ND	1.89	94.6	2.00	8.23	
Toluene*	<0.050	0.050	10/23/2024	ND	2.03	101	2.00	9.70	
Ethylbenzene*	<0.050	0.050	10/23/2024	ND	2.07	104	2.00	11.1	
Total Xylenes*	<0.150	0.150	10/23/2024	ND	6.21	103	6.00	11.4	
Total BTEX	<0.300	0.300	10/23/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1520**	16.0	10/23/2024	ND	448	112	400	3.64	QM-07

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *104 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH02A 2' (H246446-04)

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	10/23/2024	ND	1.89	94.6	2.00	8.23	
Toluene*	<0.050	0.050	10/23/2024	ND	2.03	101	2.00	9.70	
Ethylbenzene*	<0.050	0.050	10/23/2024	ND	2.07	104	2.00	11.1	
Total Xylenes*	<0.150	0.150	10/23/2024	ND	6.21	103	6.00	11.4	
Total BTEX	<0.300	0.300	10/23/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/23/2024	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*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *99.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS07 0.5' (H246446-05)

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	10/23/2024	ND	1.89	94.6	2.00	8.23	
Toluene*	<0.050	0.050	10/23/2024	ND	2.03	101	2.00	9.70	
Ethylbenzene*	<0.050	0.050	10/23/2024	ND	2.07	104	2.00	11.1	
Total Xylenes*	<0.150	0.150	10/23/2024	ND	6.21	103	6.00	11.4	
Total BTEX	<0.300	0.300	10/23/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	10/23/2024	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*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *99.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.5 %* *49.1-148*

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

R-07	The Reporting Limit for this analyte has been raised to account for target analyte concentration in the solvent.
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
Project Manager: Tacoma Morrissey
Address: 3122 National Parks Hwy
City: Carlsbad State: NM Zip: 88220
Phone #: 337-257-8307 Fax #:
Project #: 03C1558488 Project Owner:
Project Name: JRU DI 1A Battery
Project Location:
Sampler Name: Sherete Brooks

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	SAMPLING TIME	BTEX	TPH	Chloride										
H246446																												
1	PH01	1'	G	1			X					X		10/22/24	09:48	X	X	X										
2	PH01A	2'	G												09:50													
3	PH02	1'	G												09:35													
4	PH02A	2'	G												09:38													
5	SS07	0.5'	G	1			1					1		10/22/24	10:59	1	1	1										
6	PH01C	4'	G	1			X					X		10/22/24	09:53	X	X	X		Please Hold!								
7	PH02C	4'	G	1			X					X			09:42	1	1	1										

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: Sherete Brooks Date: 10/22/24 Time: 1527 Received By:
Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
REMARKS: tmorrissey@ensolum.com, kthomason@ensolum.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 5.6 Corrected Temp. °C 5.0
Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No
CHECKED BY: (Initials) AD

Turnaround Time: * 24 hr * Standard ☐ Rush ☒
Thermometer ID #113 # 140
Correction Factor -0.5°C -0.6 AD
Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No Observed Temp. °C Corrected Temp. °C

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

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

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

November 11, 2024

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/07/24 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 01 2' (H246798-01)

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	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	11/11/2024	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *131 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 02 2' (H246798-02)

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	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *125 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 03 2' (H246798-03)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *121 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 04 2' (H246798-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *129 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 05 2' (H246798-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *132 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 06 2' (H246798-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *125 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 07 2' (H246798-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *118 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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CARDINAL Laboratories

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 08 2' (H246798-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *115 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 09 2' (H246798-09)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *127 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 10 2' (H246798-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *125 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 11 2' (H246798-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *121 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 12 2' (H246798-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *122 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *108 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 13 2' (H246798-13)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *116 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 14 2' (H246798-14)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *123 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 15 2' (H246798-15)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *119 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 16 2' (H246798-16)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *118 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 17 2' (H246798-17)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *119 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 18 2' (H246798-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *121 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 01 0-2' (H246798-19)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	205	102	200	3.82	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	200	100	200	2.88	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *127 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 02 0-2' (H246798-20)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2024	ND	2.09	105	2.00	7.83	
Toluene*	<0.050	0.050	11/09/2024	ND	2.00	100	2.00	7.21	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	2.00	99.9	2.00	6.64	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.88	98.0	6.00	7.57	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	204	102	200	0.130	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	184	91.8	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *76.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.2 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 03 0-2' (H246798-21)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/08/2024	ND	2.10	105	2.00	7.93	
Toluene*	<0.050	0.050	11/08/2024	ND	2.16	108	2.00	7.75	
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.16	108	2.00	7.36	
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	11/11/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/08/2024	ND	204	102	200	0.130	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	184	91.8	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *78.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.3 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/07/2024	Sampling Date:	11/05/2024
Reported:	11/11/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 04 0-2' (H246798-22)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/08/2024	ND	2.10	105	2.00	7.93	
Toluene*	<0.050	0.050	11/08/2024	ND	2.16	108	2.00	7.75	
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.16	108	2.00	7.36	
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/08/2024	ND					

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

Chloride, SM4500Cl-B mg/kg **Analyzed By: CT**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	11/11/2024	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	11/08/2024	ND	204	102	200	0.130	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	184	91.8	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane *84.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.7 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Ensolum, LLC
Project Manager:	Tacoma Morrissey
Address:	3122 National Parks Hwy
City:	Carlsbad **State:** NM **Zip:** 88220
Phone #:	337-257-8307 **Fax #:**
Project #:	03C1558488 **Project Owner:** XTO
Project Name:	JRU DI 1A Battery
Project Location:	32.37996, -103.88669
Sampler Name:	Jesse Dorman

BILL TO

P.O. #:	
Company:	XTO Energy Inc.
Attn:	Colton Brown
Address:	3104 E. Green St.
City:	Carlsbad
State:	NM **Zip:** 88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H246798																		
1	FS01	2'	C	1			X					X		11/5/24	912			
2	FS02														915			
3	FS03														917			
4	FS04														920			
5	FS05														940			
6	FS06														945			
7	FS01														950			
8	FS08														955			
9	FS09														1023			
10	FS10														1025			

Relinquished By:	**Date:** 11.7.24	**Received By:**	
	Time: 1140		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

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

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

REMARKS: Cost Center:1082551001 Incident ID: nAPP2421529493

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 2.3 **Corrected Temp. °C** 1.9	**Sample Condition** Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)**	**Turnaround Time:** ~~1140~~ Standard ☐ Rush ☑ 48hr **Thermometer ID** ~~#113~~ **Correction Factor** ~~0.5°C~~ -0.6

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Ensolum, LLC
Project Manager:	Tacoma Morrissey
Address:	3122 National Parks Hwy
City:	Carlsbad **State:** NM **Zip:** 88220
Phone #:	337-257-8307 **Fax #:**
Project #:	03C1558488 **Project Owner:** XTO
Project Name:	JRU DI 1A Battery
Project Location:	32.37996, -103.88669
Sampler Name:	Jesse Dorman

BILL TO

P.O. #:	
Company:	XTO Energy Inc.
Attn:	Colton Brown
Address:	3104 E. Green St.
City:	Carlsbad
State:	NM **Zip:** 88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H246798																		
11	FS11	2'	C	1			X					X		11/5/24	1027	X	X	X
12	FS10														1030			
13	FS13														1130			
14	FS14														1132			
15	FS15														1135			
16	FS16														1136			
17	FS17														1150			
18	FS18	↓													1155			
19	SW01	0-2'													1205			
20	SW02	↓	↓	↓			↓					↓		↓	1210	↓	↓	↓

Relinquished By:	**Date:** 11-7-24	**Received By:**	**Verbal Result:** ☐Yes ☐No **Add'l Phone #:**
	Time: 1140		**All Results are emailed. Please provide Email address:** Thillard@ensolum.com
Relinquished By:	**Date:**	**Received By:**	BBelillI@ensolum.com TMorrissey@ensolum.com, kthomason@ensolum.com
	Time:		**REMARKS:** Cost Center: 1082551001 Incident ID: nAPP2421529493

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.3 / Corrected Temp. °C 1.9	**Sample Condition** Cool: Yes / No; Intact: Yes / No	**CHECKED BY: (Initials)** TB	**Turnaround Time:** Standard / Rush 48hr; Thermometer ID #140 (~~#113~~); Correction Factor ~~-0.5°C~~ -0.6

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

FORM-006 R 3.2 10/07/21

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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
Project Manager:	Tacoma Morrissey
Address:	3122 National Parks Hwy
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	337-257-8307
Fax #:	
Project #:	03C1558488
Project Owner:	XTO
Project Name:	JRU DI 1A Battery
Project Location:	32.37996, -103.88669
Sampler Name:	Jesse Dorman

BILL TO

P.O. #:	
Company:	XTO Energy Inc.
Attn:	Colton Brown
Address:	3104 E. Green St.
City:	Carlsbad
State:	NM
Zip:	88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H246798	~~SW02 3ft~~ JD	~~0~~																~~~~ JD
	~~SW04 JD~~																	~~~~ JD
21	SW03	0-2'	C	1			✓					✓		11/5/24	1212	✓	✓	✓
22	SW04	↓	C	1			✓					✓		↓	1215	✓	✓	✓

JD

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: [signature]	Date: 11-7-24 Time: 1410	Received By: [signature]	Verbal Result: ☐Yes ☐No Add'l Phone #:
			All Results are emailed. Please provide Email address: Thillard@ensolum.com BBelilli@ensolum.com TMorrissey@ensolum.com, kthomason@ensolum.com
Relinquished By:	Date: Time:	Received By:	REMARKS: Cost Center:1082551001 Incident ID: nAPP2421529493
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.3 Corrected Temp. °C 1.9	Sample Condition Cool Intact ☑Yes ☐Yes ☐No ☐No — CHECKED BY: (Initials) TO	Turnaround Time: Standard ☐ Rush ☑ #40 24hr Thermometer ID #113 Correction Factor -0.5°C -0.6 TO 11/7/24 — Bacteria (only) Sample Condition Cool Intact Yes☐ Yes☐ No☐ 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

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APPENDIX D

October 24, 2024 Remediation Work Plan

ENSOLUM

October 24, 2024

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

Re: Remediation Work Plan
James Ranch Unit DI 1A Battery
Incident Number NAPP2421529493
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Remediation Work Plan* (*Work Plan*) to document the site assessment activities completed to date and propose a work plan to address impacted soil identified at the James Ranch Unit DI 1A Battery (Site). The purpose of the site assessment activities was to delineate the lateral and vertical extent of impacted soil resulting from a release of produced water at the Site. The following Work Plan proposes to excavate impacted soil within the top 1 foot of the release extent.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.37996°, -103.88669°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On July 26, 2024, a corrosion on a 4-inch tester joint resulted in the release of 15 barrels (bbls) of produced water onto the pad. No fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on August 9, 2024 and the release was assigned Incident Number NAPP2421529493.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess 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 on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. In March 2013, a New Mexico Office of the State Engineer (NMOSE) permitted well (C-1916) was advanced to a depth of 188 feet bgs located approximately 0.2 miles southeast of the Site and is depicted on Figure 1. Depth to groundwater is documented to be 110 feet bgs. The Well Record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash located approximately 581 feet southwest 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 underlain by unstable geology (high potential karst designation area).

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): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On August 9, 2024 Ensolum personnel conducted a Site visit to evaluate the release extent based on information provided on the C-141 and visual observations. Ensolum personnel collected seven delineation soil samples (SS01 through SS07) within the release extent from a depth of 0.5 feet bgs to assess the lateral extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The 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 (Eurofins) in Hobbs, New Mexico, for analysis of the following contaminants of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500

On October 22, 2024, delineation potholes PH01 and PH02 were advanced in the approximate locations of SS01 and SS02, respectively. The delineation potholes were advanced via backhoe to a maximum depth of 4 feet bgs. Discrete soil samples were collected from each pothole at depths ranging from 1-foot bgs to 4 feet bgs. Soil from the boreholes was field screened for VOCs and chloride. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix B. Two delineation soil samples from each pothole, at depths of 1 foot and 2 feet bgs were collected, handled and analyzed as described above at Cardinal in Hobbs, New Mexico. The soil sample locations are depicted on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples SS01/PH01 through SS02/PH02 indicated that chloride concentrations exceeded the Closure Criteria at depths ranging from 0.5 feet to 1 foot bgs. The terminal depth sample from each delineation pothole, collected at 2 feet bgs, indicated concentrations of all COCs were compliant with the Closure Criteria and successfully defined the vertical extent of impacted soil. In addition, laboratory analytical results for delineation soil samples SS03 through SS07 collected outside of the release extent indicated concentrations of all COCs were compliant with the Closure Criteria and successfully defined the lateral extent of the release. Laboratory Analytical Reports & Chain-of-Custody Documentation are presented in Appendix D.

PROPOSED REMEDIATION WORK PLAN

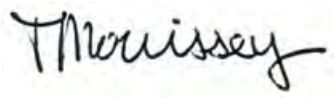
The delineation soil sampling results indicate soil containing elevated chloride concentrations exists across an approximate 3,450 square foot area and extends to a maximum depth of 2 feet bgs. XTO proposes to complete the following remediation activities:

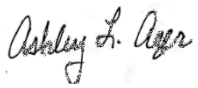
- Excavation of chloride impacted soil to a depth of 2 feet bgs. Excavation will proceed laterally until sidewall samples confirm chloride concentrations are compliant with the Closure Criteria.
- An estimated 300 cubic yards of chloride impacted soil will be excavated. The excavated soil will be transferred a New Mexico approved landfill facility for disposal.
- The excavation will be backfilled and recontoured to match pre-existing conditions

XTO will proceed with the excavation and soil sampling activities and will submit a Closure Report within 90 days of the date of approval of this Work Plan by the NMOCD.

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

Sincerely,
Ensolum, LLC





Tacoma Morrissey, MS
Associate Principal

Ashley Ager, PG, MS
Program Director

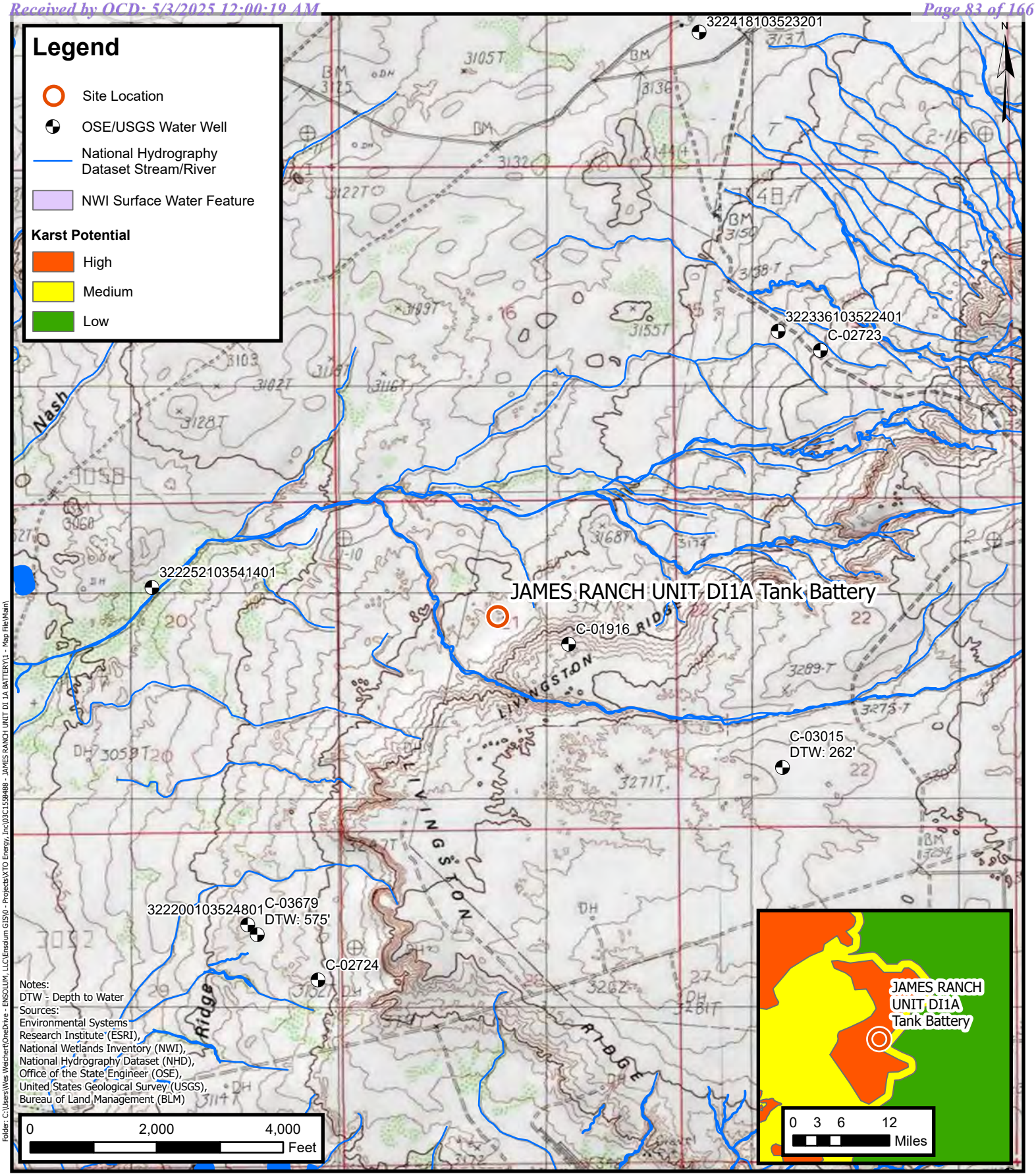
cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic / Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation

ENSOLUM

FIGURES



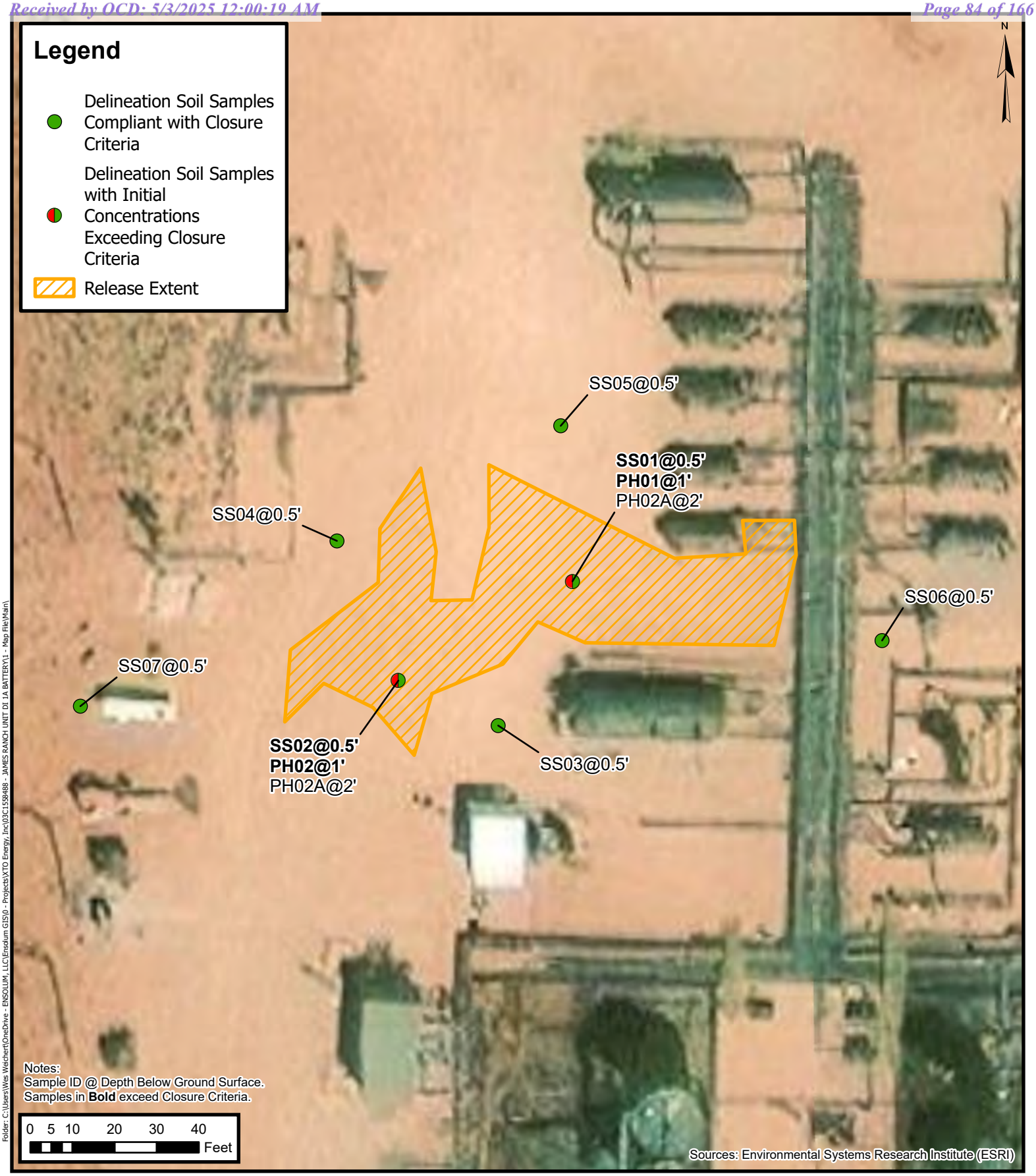
Folder: C:\Users\Wes Weichert\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1598488 - JAMES RANCH UNIT DI 1A BATTERY\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
JAMES RANCH UNIT DI 1A BATTERY
Incident Number: NAPP2421529493
Unit A, Sec 21, T22S, R30E
Eddy Co, New Mexico, United States

FIGURE 1



Folder: C:\Users\Wes Welchert\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1598488 - JAMES RANCH UNIT DI 1A BATTERY\1 - Map File\Main\

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Delineation Soil Sample Locations

XTO Energy, Inc
JAMES RANCH UNIT DI 1A BATTERY
Incident Number: NAPP2421529493
Unit A, Sec 21, T22S, R30E
Eddy Co, New Mexico, United States

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JRU DI 1A 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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**8,600**
PH01	10/22/2024	1	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	**2,120**
PH01A	10/22/2024	2	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	352
SS02	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**7,730**
PH02	10/22/2024	1	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	**1,520**
PH02A	10/22/2024	2	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	240
SS03	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
SS04	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS05	8/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	8/9/2024	0.5	<0.050	<0.300	<10.0	77.4	<10.0	77.4	77.4	368
SS07	10/22/2024	0.5	<0.050	<0.300	<20.0	<10.0	<10.0	<20.0	<20.0	240

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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APPENDIX A

Referenced Well Records

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP:

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: C 01916

Name of well owner: BOPCO L.P.

Mailing address: P.O. Box 2760

City: Midland State: Texas Zip code: 79702

Phone number: 432- 556 -8730 E-mail: TASavoie@Basspet.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Straub Corporation – Raymond Straub

New Mexico Well Driller License No.: WD-1478 Expiration Date: June-2013

IV. WELL INFORMATION:

Note: A copy of the existing Well Record for the well to be plugged should be attached to this plan.

STATE ENGINEER OFFICE ROSWELL 2013 APR -1 P 1:19

1) GPS Well Location: Latitude: 32 deg, 22 min, 54.42 sec
Longitude: -103 deg, 53 min, 00.57 sec, NAD 83

2) Reason(s) for plugging well: Water well is in the path of new construction. Water quality is below useable quality.

3) Was well used for any type of monitoring program? NO If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? YES If yes, provide additional detail, including analytical results and/or laboratory report(s): See Attachments

5) Static water level: ~ 110 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 188 feet

C-1916
4167710

7) Inside diameter of innermost casing: 5 inches.

8) Casing material: Steel

9) The well was constructed with:

UNKWN an open-hole production interval, state the open interval: _____

UNKWN a well screen or perforated pipe, state the screened interval(s): _____

10) What annular interval surrounding the artesian casing of this well is cement-grouted? NA

11) Was the well built with surface casing? UNKWN If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe: _____

12) Has all pumping equipment and associated piping been removed from the well? yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well: The casing will be cut off below ground surface. A tremie line will be install and a Portland Type II/ V Cement grout will be placed from the bottom to within 5' of the surface. A concrete cap will be placed from 5' to 1' and the remainder will be filled with soil.

2) Will well head be cut-off below land surface after plugging? yes

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 20 Sacks

4) Type of Cement proposed: See Attached Conditions of Approval C.6
5% Fullers Earth / Type II/V Cement
See Attached Conditions of Approval C.6

5) Proposed cement grout mix: 8 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____ batch-mixed and delivered to the site

X mixed on site

7) Grout additives requested, and percent by dry weight relative to cement: Salt water gel – The use of Fuller's Earth is to help with leak-off to the formation. Since the formation water is high in chlorides, Volclay Sodium Bentonite will not be acceptable. 5 LBS. of Gel per 94 LBS. of cement

SEE Attached Conditions of Approval C.G.

8) Additional notes and calculations: ((dia.^{2} * 0.005454)*Depth)/ 1.25 cuft-bag

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

The Public Land Survey is Section 21, Township 22 South, Range 30 East.

VIII. SIGNATURE:

I, Raymond L Straub Jr., P.G. , say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Signature of Applicant

03/28/2013
Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

✓ Approved subject to the attached conditions.
____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 11th day of April, 13

Scott A. Verhines, State Engineer

By: Tim Williams

Tim Williams
Carlsbad Basin Watermaster

STATE ENGINEER OFFICE
ROSWELL, NM
2013 APR -1 P 1:19

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			5 feet
Bottom of proposed interval of grout placement (ft bgl)			188 feet
Theoretical volume of grout required per interval (gallons)			20 Sacks
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			8 gallons
Mixed on-site or batch-mixed and delivered?			On-site
Grout additive 1 requested			5% Saltwater Bentonite
Additive 1 percent by dry weight relative to cement			5 LBS.
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2013 APR -1 P 1: 19

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2013 APR -1 P 1:19

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Scott A. Verhines, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

April 17, 2013

BOPCO, L.P.
P.O. Box 2760
Midland, Texas 79702

RE: *Well Plugging Plan of Operations* for C-1916

Greetings:

Enclosed is your copy of the Well Plugging Plan for the above referenced project. The attached Conditions of Approval modify your Plan in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted August 31, 2005 by the State Engineer. Should you have any questions about the Plan or Conditions of Approval please do not hesitate to contact our office.

Sincerely,

Catherine Goetz
Water Resource Specialist
District II Office of the State Engineer

Enclosures

cc: Office of the State Engineer Santa Fe
Straub Corporation

Analytical Laboratory Report for:
BOPCO

BAKER HUGHES

Account Representative:
Willis Mossman

Production Water Analysis

Listed below please find water analysis report from: Perry R Bass Wsw, WATER SUPPLY WELL

Lab Test Number	Sample Date
201301003615	02/13/2013

Specific Gravity:	1.100
TDS:	153402
pH:	6.65

Cations	mg/L
Calcium as Ca^{++}	2669
Magnesium as Mg^{++}	2188
Sodium as Na^{+}	52812
Iron as Fe^{++}	9.49
Potassium as K^{+}	7466.0
Barium as Ba^{++}	0.28
Strontium as Sr^{++}	86.46
Manganese as Mn^{++}	0.46

Anions	mg/L
Bicarbonate as HCO_3^{-}	171
Sulfate as $SO_4^{=}$	6500
Chloride as Cl^{-}	81500

Gases	mg/L
Carbon Dioxide as CO_2	30
Hydrogen Sulfide as H_2S	0.0

Lab Comments:
SURFACE TEMP.=65.7°F

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2013 APR -1 P 1:19

Analytical Laboratory Report for:
BOPCO

Account Representative:
Willis Mossman

DownHole SAT™ Scale Prediction @ 250 deg. F

Lab Test Number	Sample Date	Location
201301003615	02/13/2013	WATER SUPPLY WELL

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	0.46	-0.05
Strontianite (SrCO3)	0.00	-25.80
Anhydrite (CaSO4)	6.85	1699.09
Gypsum (CaSO4*2H2O)	1.55	710.25
Barite (BaSO4)	0.07	-6.67
Celestite (SrSO4)	0.23	-487.80
Siderite (FeCO3)	3.44	0.04
Halite (NaCl)	0.04	-545840.63
Iron sulfide (FeS)	0.00	-1.34

Interpretation of DHSat Results:
The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 199433 **Transaction Desc:** C 01916 **File Date:** 07/31/1980

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: mvigil
Applicant: PERRY R. BASS

Events

Date	Type	Description	Comment	Processed By
07/31/1980	APP	Application Received	*	mvigil
08/04/1980	FIN	Final Action on application		mvigil
08/04/1980	WAP	General Approval Letter		mvigil
09/01/1981	EXP	Expired Permit (well log late)		mvigil

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 01916		3		PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
**Point of Diversion				
C 01916		605068	3582947*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Remarks

WATER SUPPLY WELL FOR THE DRILLING OF JAMES RANCH UNIT #12.

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2013 APR -1 P 1:19

Conditions

3 Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.

5A A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water; pumping records shall be submitted to the District Supervisor for each calendar month on or before the 10th day of the following month.

6 The well shall be plugged upon completion of the permitted use, and a plugging report shall be filed with the State Engineer within 10 days.

Action of the State Engineer

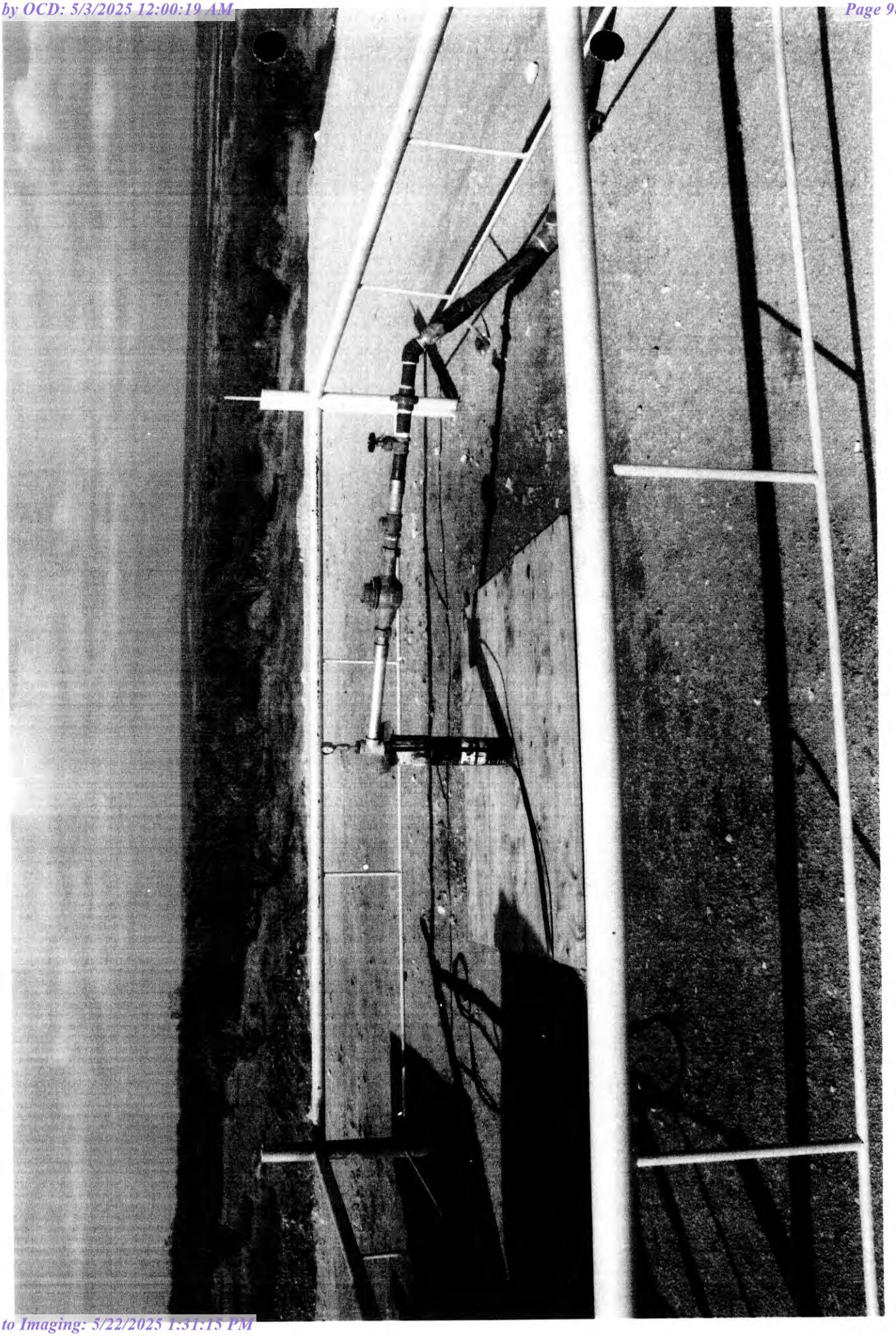
Approval Code: A - Approved
Action Date: 08/04/1980
Log Due Date: 08/31/1981
State Engineer:

Conditions of Approval for C-1916 abandonment:

1) Plugging operations will be conducted in accordance with NMED, NMOCD, or other State or Federal agency having oversight for the above described project.

2) The well shall be plugged using a cement slurry (5.2 gals water per 94lb bag of Portland cement). It is understood that due to the high sulfate content Type V cement will be used as the data provided on water quality indicates 6,500 ppm sulfates. The cement grout will be pumped via tremie line from bottom up.

3) By item 2 above, the plan meets OSE requirements for tremie/grout abandonment, however, well records are not available to confirm well design/annular seals.



ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

Sample Name: PH01	10/22/2024	
Site Name: JRU DI 1A Battery		
Incident Number: nAPP2421529498		
Job Number: 03C1558488		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SAM	Method: Backhoe
Coordinates: 32.379766, -103.886904	Hole Diameter: 3'	Total Depth: 4'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	2,389	0.3	Yes	PH01	1	1	SM	Light brown, fine grained, silty sand
Dry	330	0.0	No	PH01A	2	2	CL	Red clay with silt enclosed
Dry	285.6	0.0	No			3	CL	SAA
Dry	180	0.0	No			4	CL	SAA

NFE Total Depth @ 4'

ENSOLUM

Sample Name: PH02	10/22/2024	
Site Name: JRU DI 1A Battery		
Incident Number: nAPP2421529498		
Job Number: 03C1558488		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SAM	Method: Backhoe
Coordinates: 32.379698, -103.887038	Hole Diameter: 3'	Total Depth: 4'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	1,512	0.0	Yes	PH02	1	1	CL	Red clay with silt mixed with tan clay with silt
Dry	<168	0.0	No	PH02A	2	2	CL	Red clay with silt
Dry	<168	0.0	No			3	CL	SAA
Dry	<168	0.0	No			4	CL	SAA

NFE Total Depth @ 4'

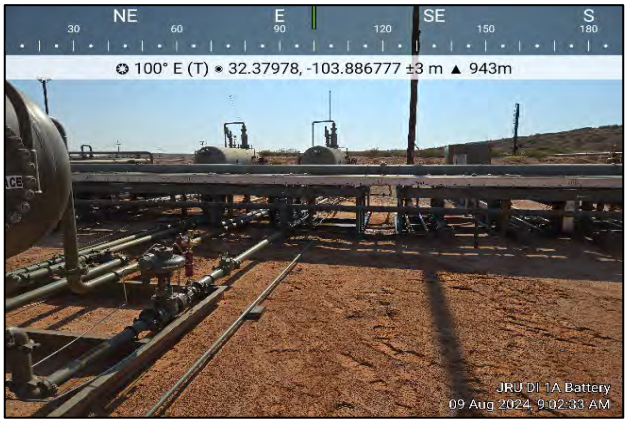
ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
James Ranch Unit DI 1A Battery
NAPP2421529493



Photograph: 1 Date:8/9/2024
Description: Soil staining in release footprint
View: Southeast

Photograph: 2 Date: 8/9/2024
Description: Active leak
View: Northwest

Photograph: 3 Date: 10/22/24
Description: Pothole activities
View: Southwest

Photograph: 4 Date: 10/22/2024
Description: Remediation activities
View: Northeast

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

August 21, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/15/24 13:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 01 0.5' (H244957-01)

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	08/17/2024	ND	2.07	104	2.00	2.84	
Toluene*	<0.050	0.050	08/17/2024	ND	1.98	99.1	2.00	2.26	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	1.97	98.5	2.00	1.54	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	5.84	97.3	6.00	1.46	
Total BTEX	<0.300	0.300	08/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8600**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *75.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.1 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 02 0.5' (H244957-02)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7730**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *81.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.7 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 03 0.5' (H244957-03)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *74.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.1 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 04 0.5' (H244957-04)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *78.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.1 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 05 0.5' (H244957-05)

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	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *77.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.7 %* *49.1-148*

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
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	08/15/2024	Sampling Date:	08/09/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS 06 0.5' (H244957-06)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/17/2024	ND	2.12	106	2.00	2.67	
Toluene*	<0.050	0.050	08/17/2024	ND	2.14	107	2.00	3.11	
Ethylbenzene*	<0.050	0.050	08/17/2024	ND	2.13	107	2.00	3.82	
Total Xylenes*	<0.150	0.150	08/17/2024	ND	6.63	110	6.00	3.61	
Total BTEX	<0.300	0.300	08/17/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	08/19/2024	ND	416	104	400	7.41	

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	08/16/2024	ND	227	113	200	3.61	
DRO >C10-C28*	**77.4**	10.0	08/16/2024	ND	216	108	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	08/16/2024	ND					

Surrogate: 1-Chlorooctane *86.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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: 3122 National Parks Hwy	**Company:** XTO Energy Inc.
City: Carlsbad **State:** NM **Zip:** 88220	**Attn:** Amy Ruth
Phone #: 575-937-3906 **Fax #:**	**Address:** 3104 E. Green St.
Project #: : 03C1558488 **Project Owner:** XTO	**City:** Carlsbad
Project Name: JRU DI 1A Battery	**State:** NM **Zip:** 88220
Project Location: 32.37996, -103.88669	**Phone #:**
Sampler Name: Jesse Dorman	**Fax #:**

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample 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: BTEX	TPH	CHLORIDE
H244957																		
1	SS01	0.5'	G	1			✓					✓		8/9/24	0940	✓	✓	✓
2	SS02	↓	↓	↓			↓					↓			0945	✓	✓	✓
3	SS03														10:05	✓	✓	✓
4	SS04														10:10	✓	✓	✓
5	SS05														10:20	✓	✓	✓
6	SS06	↓	↓	↓			↓					↓			10:25	✓	✓	✓

Relinquished By:	**Date:** 8.15.24 **Time:** 1305	**Received By:**	**Verbal Result:** ☐ Yes ☑ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** THillard@ensolum.com TMorrissey@ensolum.com,
			REMARKS: Cost Center: 1082551001 Incident ID: nAPP2421529493

Delivered By: (Circle One)	Observed Temp. °C 39	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☐ Yes ☑ No	**CHECKED BY: (Initials)**	**Turnaround Time:** ☐ Standard ☑ Rush 8.15.24
Sampler - UPS - Bus - Other:	Corrected Temp. °C 33		KPP	Thermometer ID #113 Correction Factor -0.5°C -0.10°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

October 23, 2024

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/22/24 15:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH01 1' (H246446-01)

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	10/22/2024	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	10/22/2024	ND	2.00	99.9	2.00	2.61	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	2.02	101	2.00	2.44	
Total Xylenes*	<0.150	0.150	10/22/2024	ND	6.09	102	6.00	2.01	
Total BTEX	<0.300	0.300	10/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2120**	16.0	10/23/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *97.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.8 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH01A 2' (H246446-02)

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	10/22/2024	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	10/22/2024	ND	2.00	99.9	2.00	2.61	
Ethylbenzene*	<0.050	0.050	10/22/2024	ND	2.02	101	2.00	2.44	
Total Xylenes*	<0.150	0.150	10/22/2024	ND	6.09	102	6.00	2.01	
Total BTEX	<0.300	0.300	10/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	10/23/2024	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *94.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.4 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH02 1' (H246446-03)

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	10/23/2024	ND	1.89	94.6	2.00	8.23	
Toluene*	<0.050	0.050	10/23/2024	ND	2.03	101	2.00	9.70	
Ethylbenzene*	<0.050	0.050	10/23/2024	ND	2.07	104	2.00	11.1	
Total Xylenes*	<0.150	0.150	10/23/2024	ND	6.21	103	6.00	11.4	
Total BTEX	<0.300	0.300	10/23/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1520**	16.0	10/23/2024	ND	448	112	400	3.64	QM-07

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *104 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: PH02A 2' (H246446-04)

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	10/23/2024	ND	1.89	94.6	2.00	8.23	
Toluene*	<0.050	0.050	10/23/2024	ND	2.03	101	2.00	9.70	
Ethylbenzene*	<0.050	0.050	10/23/2024	ND	2.07	104	2.00	11.1	
Total Xylenes*	<0.150	0.150	10/23/2024	ND	6.21	103	6.00	11.4	
Total BTEX	<0.300	0.300	10/23/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	10/23/2024	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*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *99.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	10/22/2024	Sampling Date:	10/22/2024
Reported:	10/23/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558488	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.37996-103.88669		

Sample ID: SS07 0.5' (H246446-05)

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	10/23/2024	ND	1.89	94.6	2.00	8.23	
Toluene*	<0.050	0.050	10/23/2024	ND	2.03	101	2.00	9.70	
Ethylbenzene*	<0.050	0.050	10/23/2024	ND	2.07	104	2.00	11.1	
Total Xylenes*	<0.150	0.150	10/23/2024	ND	6.21	103	6.00	11.4	
Total BTEX	<0.300	0.300	10/23/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	10/23/2024	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*	<20.0	20.0	10/23/2024	ND	212	106	200	4.76	R-07
DRO >C10-C28*	<10.0	10.0	10/23/2024	ND	224	112	200	4.82	
EXT DRO >C28-C36	<10.0	10.0	10/23/2024	ND					

Surrogate: 1-Chlorooctane *99.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.5 %* *49.1-148*

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

R-07	The Reporting Limit for this analyte has been raised to account for target analyte concentration in the solvent.
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
Project Manager: Tacoma Morrissey
Address: 3122 National Parks Hwy
City: Carlsbad State: NM Zip: 88220
Phone #: 337-257-8307 Fax #:
Project #: 03C1558488 Project Owner:
Project Name: JRU DI 1A Battery
Project Location:
Sampler Name: Sherede Brooks

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	SAMPLING TIME	BTEX	TPH	Chloride											
H246446																													
1	PH01	1'	G	1			X					X		10/22/24	09:48	X	X	X											
2	PH01A	2'	G												09:50														
3	PH02	1'	G												09:35														
4	PH02A	2'	G												09:38														
5	SS07	0.5'	G	1			1					1		10/22/24	10:59	1	1	1											
6	PH01C	4'	G	1			X					X		10/22/24	09:53	X	X	X		Please hold!									
7	PH02C	4'	G	1			X					X			09:42	1	1	1											

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: Sherede Brooks Date: 10/22/24 Time: 1527 Received By:
Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
REMARKS: tmorrissey@ensolum.com, kthomason@ensolum.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 5.6 Corrected Temp. °C 5.0
Sample Condition Cool Intact: ☑ Yes ☑ Yes ☐ No ☐ No
CHECKED BY: (Initials) AD

Turnaround Time: * 24 hr * Standard ☐ Rush ☒
Thermometer ID #113 # 140
Correction Factor -0.5°C -0.6 AD
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

FORM-006 R 3.2 10/07/21

ENSOLUM

APPENDIX B

Excavation Guidance Document

ENSOLUM

April 29, 2025

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

Re: Excavation Guidance Document
James Ranch Unit DI 1A Battery
Incident Number NAPP2421529493
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) has prepared this document on behalf of XTO Energy, Inc. (XTO), to provide guidance on safety precautions related to the proposed excavation near existing production equipment. This guidance applies to the proposed excavation and applies only to the James Ranch Unit DI 1A Battery (Site), for which a Site Map is attached as Figure 1.

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Excavation Standard 29 Code of Federal Regulations (CFR) Part 1926 Sub-part P Section 1926.652(i) and 1926.652(j) and under the consultation of a Registered Professional Engineer (RPE). The document includes a review of the stability of adjacent structures and protection of employees from loose rocks, soil, and equipment and analysis of the following parameters:

- Soil types and conditions leading to cave-ins;
- Stability of engineered facility equipment with requested excavation;
- Protection of employees from materials and equipment that could fall or roll into an excavation; and
- Other hazardous conditions, including confined spaces.

This guidance document must be reviewed before starting any proposed excavation activities and kept on site if excavation activities are occurring. In addition, a copy of the OSHA Excavation Standard 29 CFR Part 1926 Sub-part P will be kept on site.

Review of OSHA Excavation Standards indicates the following guidance for general excavation activities:

- The walls of any excavated areas must be sloped to a maximum 1.5 horizontal to 1 vertical for Type C soils.
- OSHA Excavation Standard 29 CFR Part 1926 Sub-part P indicates the following:
    - Excavation below the level of the base or footing of any foundation or retaining wall poses a reasonable hazard to employees and should not be conduscted without major construction- either removal of equipment and/or installation of significant physical safety measures.
    - Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into any excavation. Protection shall be provided by

placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

- When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a Competent Person shall determine the degree to which the actual slope must be reduced below the maximum allowable slope, and shall assure that such reduction is achieved. Surcharge loads from adjacent structures shall be evaluated in accordance with § 1926.651(i).

EXCAVATION ANALYSIS PARAMETERS

The following findings were observed at the Site:

- Soil type C was observed in the Site visit. Type C soil will be utilized for the recommendation, which is the most conservative scenario.
- The area in question entails a 12-foot by 9-foot section directly adjacent to and beneath equipment as shown on Figure 2.
- To the west of the proposed excavation area is an engineered separator structure measuring 20 feet by 9 feet with 4-inch steel C-channel footer. The separator tank measures approximately 20 feet by 6 feet with an estimated dry weight of 18,000 pounds without accounting for support structures.
- To the east of the proposed excavation area is an engineered pipe rack containing multiple pipelines and electrical conduits measuring 12 feet wide by an undetermined length exceeding 10 times the width. The pipe rack is supported by multiple C-channel footers.
- Six pipelines and an electrical tray extend across the requested excavation area. Concrete blocks are placed below the pipelines for support.

ENGINEER RECOMMENDATIONS

Review of the above-mentioned parameters, OSHA regulations, and Site conditions observed during Site visits were completed and the following RPE recommendations were reached:

- Stress to the soil below the separator structure estimated by the 2:1 Stress Distribution Model assumes the underlain soil is homogenous and isotropic. Pictorials illustrating the 2:1 stress distribution model are included in Appendix A. The maximum slope of sidewalls is 1 horizontal to 2 vertical based on this model.
- Using the separator structure footing bearing capacity in Terzaghi's bearing capacity equation, the bearing capacity would be undermined with slopes of 30 degrees beginning less than 2 times the width of the footing. With the width of the separator structure measuing 9 feet, the beginning of the slope should be limited to beginning no less than 18 feet from the edge of the separator structure footing without substantial supports added to the structure. This assumes loose to medium granular cohesionless soils with no shallow groundwater.
- Stress to the soil below the pipe rack structure can be estimated by the Boussinesq solution for infinitely long footing strip foundations assuming the underlain soil is homogenous and isotropic. Pictorials illustrating the Boussinesq solution lateral pressures and isobars are included in Appendix A. The maximum slope of sidewalls is 24 feet horizontal to 6 feet vertical from the center of the pipe rack assuming a 12-foot width for the pipe rack. The beginning of the slope should be limited to beginning no less than 6 feet from the edge of the pipe rack footing to prevent disruption of the stability of underlain soil.

- Based on the above analysis of all potential stresses related to weight distribution and bearing capacity, it is recommended that any excavation remain no less than 6 feet from the pipe rack footing and no less than 18 feet from the separator footing. Any excavation completed should maintain a maximum slope of 30 degrees.

CONCLUSIONS

Based on the dimensions of the requested excavation and presence of adjacent structures, there is inadequate structure support to conduct excavation of the identified impacted soil in a manner that both protects personnel health and equipment stability.

Sincerely,

Ensolum, LLC

Kyle Schildt
Director Engineering Services

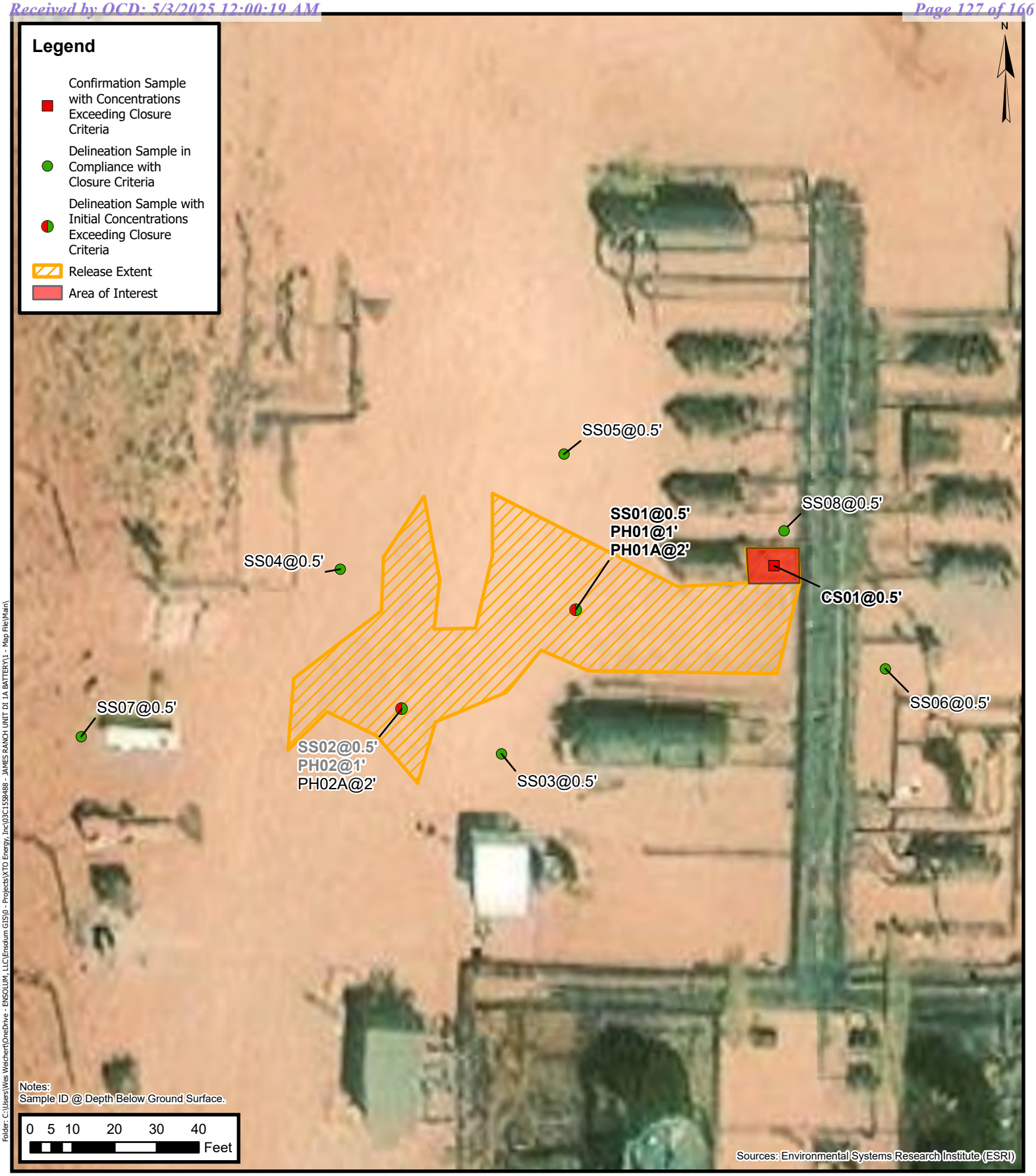
cc: Colton Brown, XTO
Kaylan Dirkx, XTO
New Mexico State Land Office

Appendices:

Figure 1 Site Location Map
Figure 2 Area of Interest Diagram
Appendix A Engineering Models

ENSOLUM

FIGURES



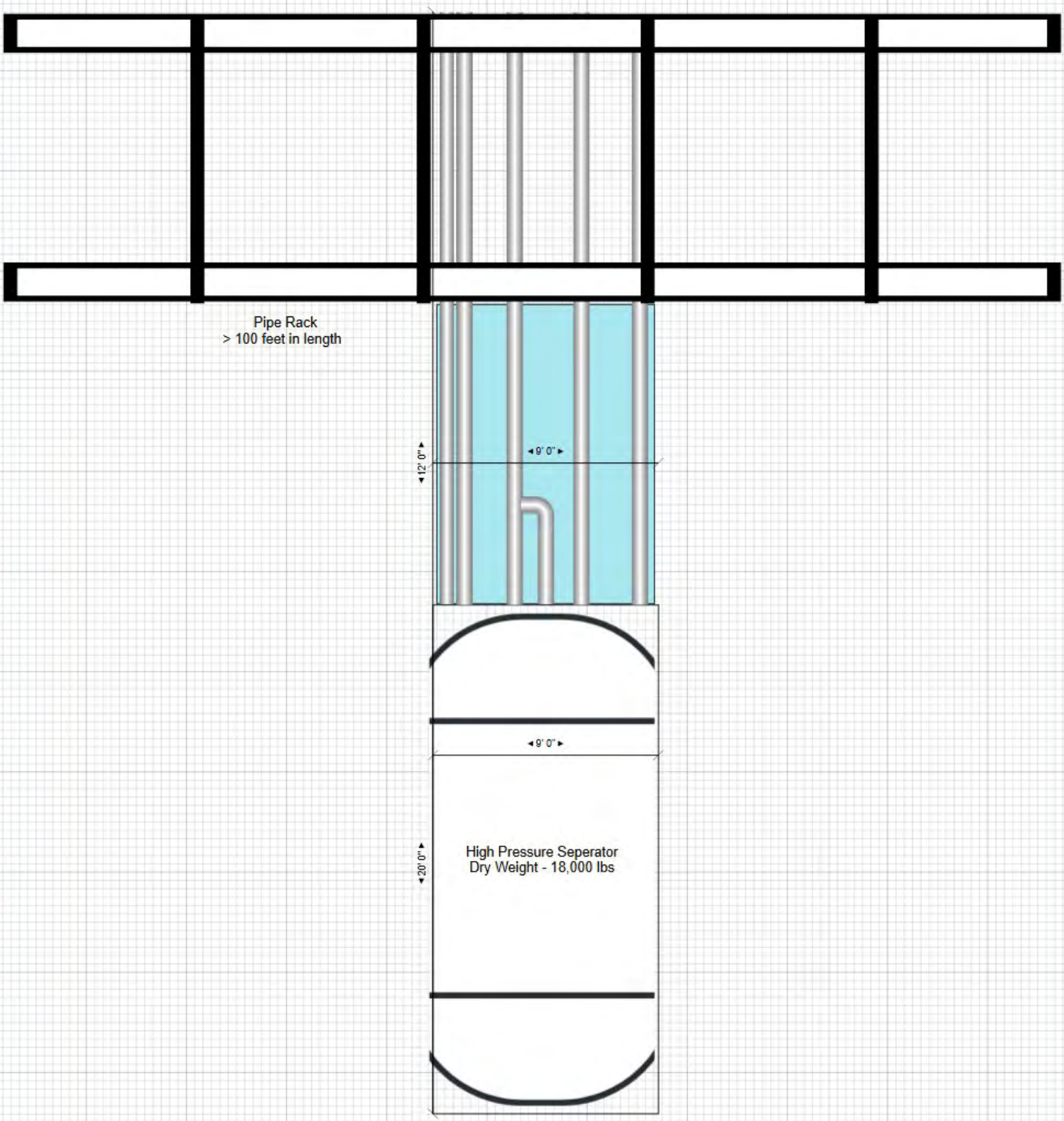
Folder: C:\Users\Wes Welchert\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1598488 - JAMES RANCH UNIT DI 1A BATTERY\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Map

XTO Energy, Inc
JAMES RANCH UNIT DI 1A BATTERY
Incident Number: NAPP2421529493
Unit A, Sec 21, T22S, R30E
Eddy Co, New Mexico, United States

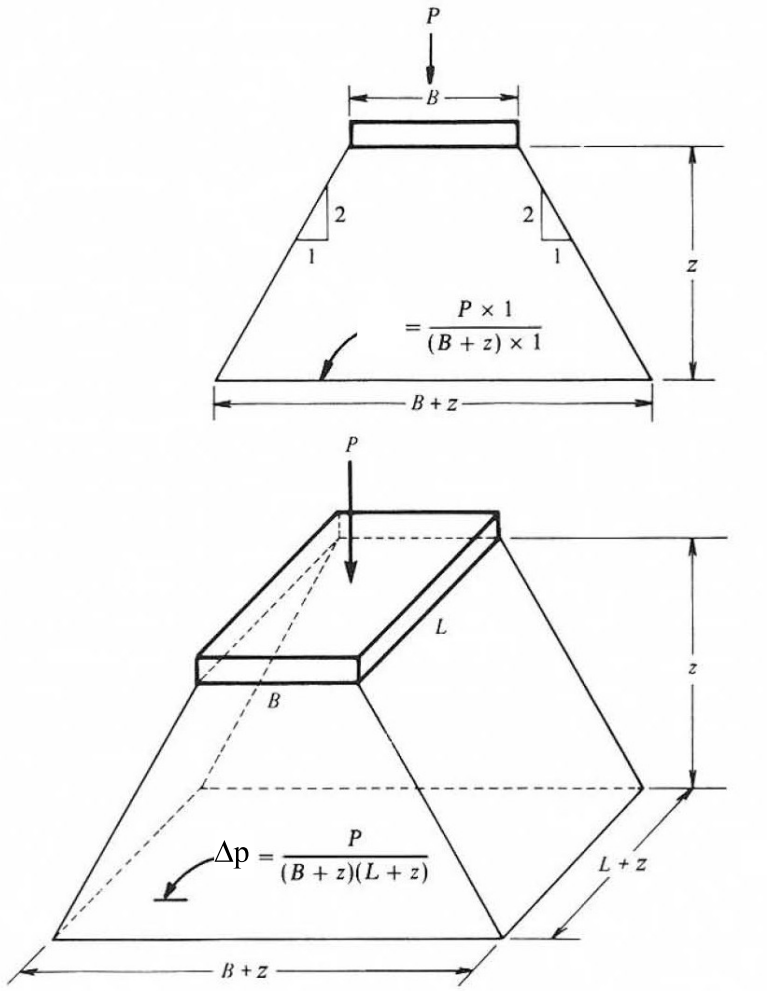
FIGURE 1



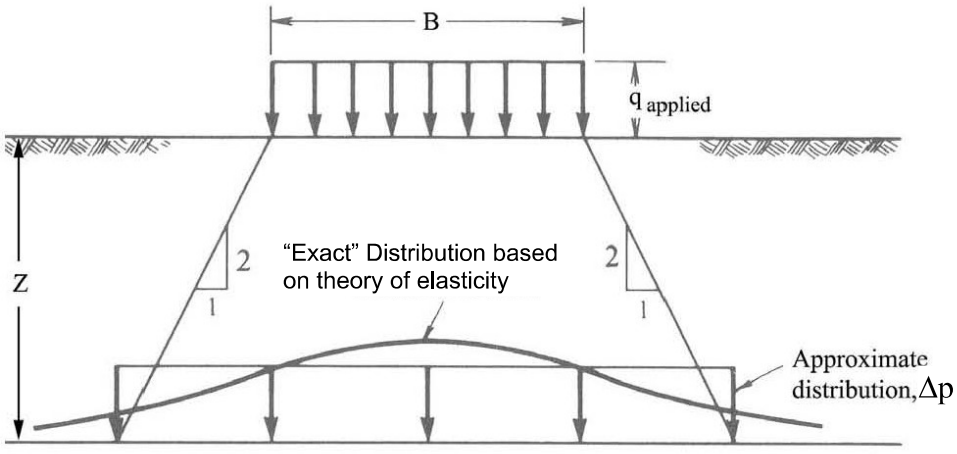
Site: JRU DI 1A	Drawing: 801506	Project: 03C1558488	Drawn: Tracy Hillard	Notes:	Ensolum, LLC 3122 National Parks Hwy Carlsbad, NM 88220
Title: Area of Investigation	Scale: 1/4":1'0"	Date: 02/20/2025	Rev: A		

ENSOLUM

Appendix A
Engineering Models



(a)



(b)

Figure 2-10. Distribution of vertical stress by the 2:1 method (after Perloff and Baron, 1976).

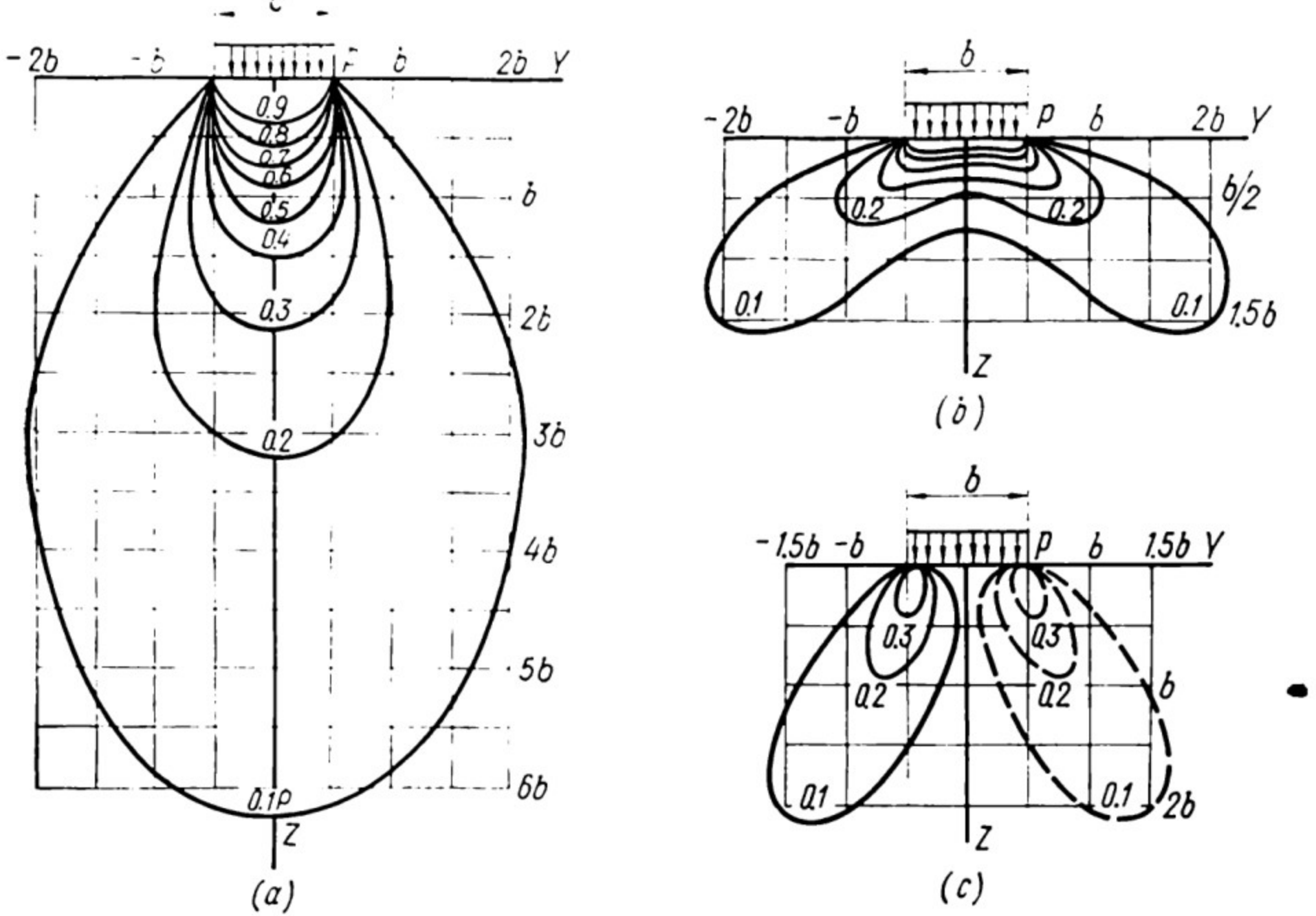
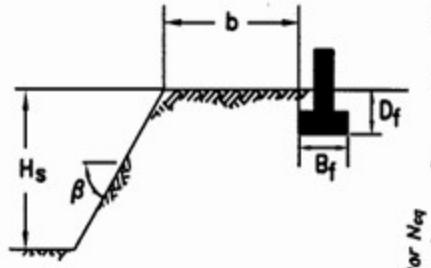
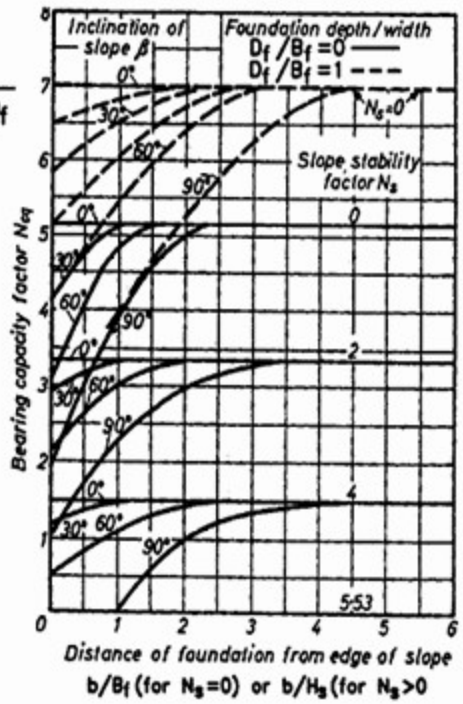


Fig. 49. Lines of equal stresses in a linearly deformable massif for the planar problem

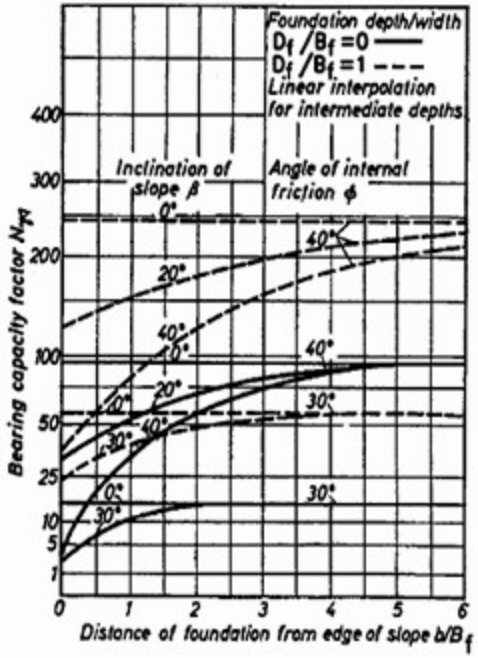
(a) isobars σ_z; (b) lateral pressure σ_y; (c) shears τ_{zx}



(d) Geometry



(e) Cohesive Soil ($\phi = 0$)



(f) Cohesionless Soil ($c = 0$)

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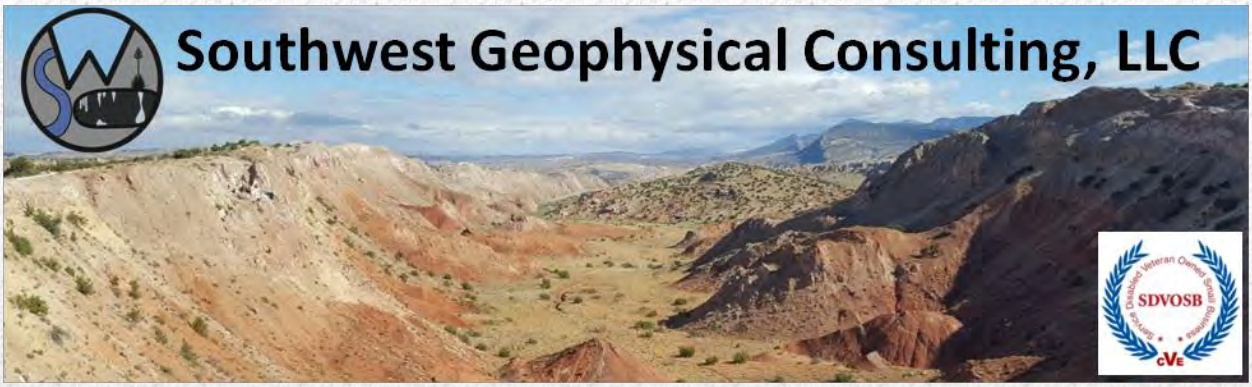
APPENDIX C

Environmental Karst Study Report



Environmental Karst Study Report
James Ranch Unit DI 1A Battery Release
Eddy County, New Mexico

Prepared For:

Ensolum, LLC

3122 National Parks Hwy

Carlsbad, NM 88220

☐ **Positive within 200 feet of spill delineation boundary**

☑ **Negative within 200 feet of spill delineation boundary**

☑ **Stable** ☐ **Unstable Ground**

☐ **Karst Monitor Recommended**

April 4, 2025

ENS-005-20250205

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1.0 INTRODUCTION

This report was commissioned by Ensolum, LLC (hereinafter referred to as "the client"), on February 5, 2025, for the purpose of conducting an environmental karst study within an area encompassing the James Ranch Unit DI 1A Battery Release site (project number 03C1558488, hereinafter termed “JRU1A8”) centered at N 32.379839° W 103.886832°

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 the spill boundary of the James Ranch Unit DI 1A Battery Release using electrical resistivity imaging[3].

1.2 Summary of Findings

- **No surface karst features exist within the 200-foot (61-meter) zone surrounding the spill delineation boundary.**
- **No anomalies consistent with air-filled voids are located within the JRU1A8 resistivity 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.**

1.3 Affected Environment

The JRU1A8 project site 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. Additionally, 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 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[4]. These designations are also recognized by the New Mexico State Land Office (NMSLO). This project occurs within a **HIGH** karst occurrence zone (HKOZ)[5] (**Figure 1**).

A high karst occurrence zone is defined as an area in known soluble rock types that contains a high frequency of significant caves and karst features such as sinkholes, bedrock fractures that provide rapid recharge of karst aquifers, and springs that provide riparian habitat[4].

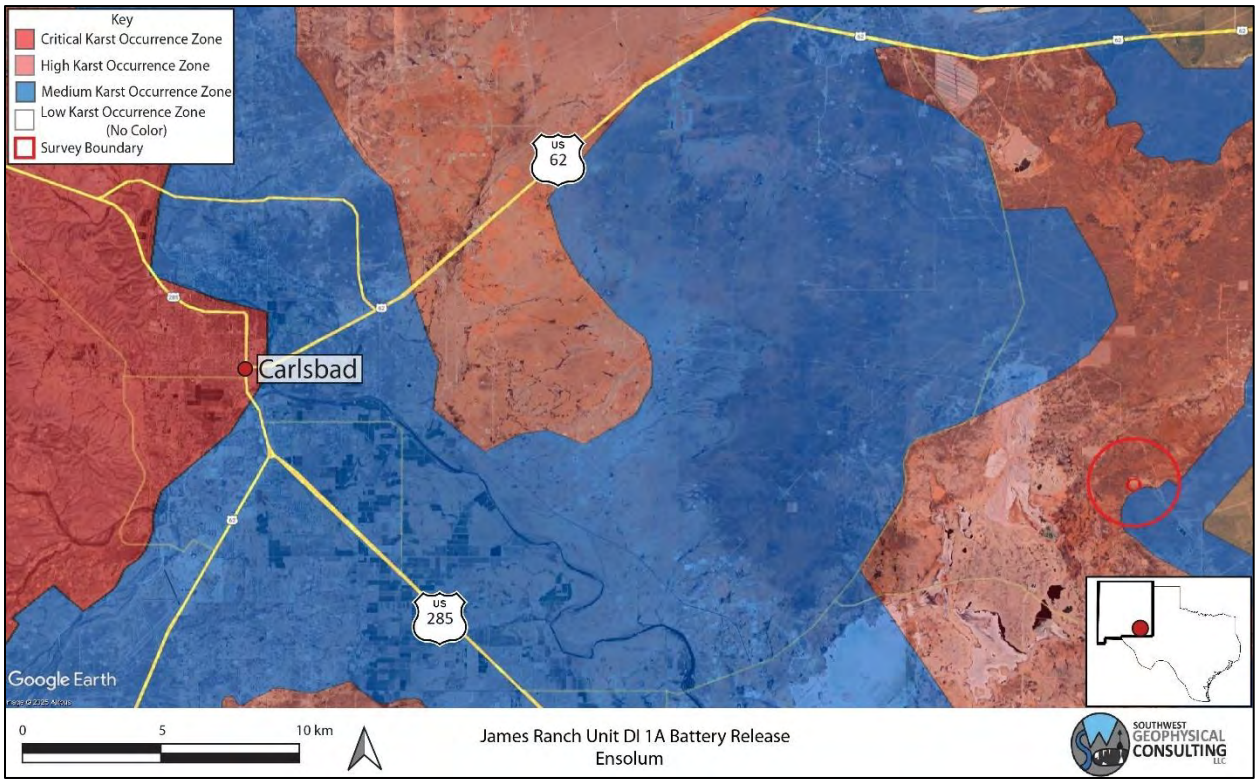

Figure 1: Karst occurrence zone overview. Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

Due to the rapidity with which evaporite karst develops, each location within a CKOZ or HKOZ 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, the information contained in this report is accurate at the date of issue. Due to the nature of karst terrain, the information in this report shall not be used beyond two years past the dates of the field work provided in section **2.3 Description of Survey**. 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 32.5 kilometers (20.2 miles) east-southeast of Carlsbad, New Mexico, north of the junction of Cimarron Road and Highway 128. The release area is located within section 21 of NM T22S R30E[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 spill delineation boundary is located within an HKOZ[5] (**Figure 1**) and BLM-CFO managed land[10] (**Figure 2**).

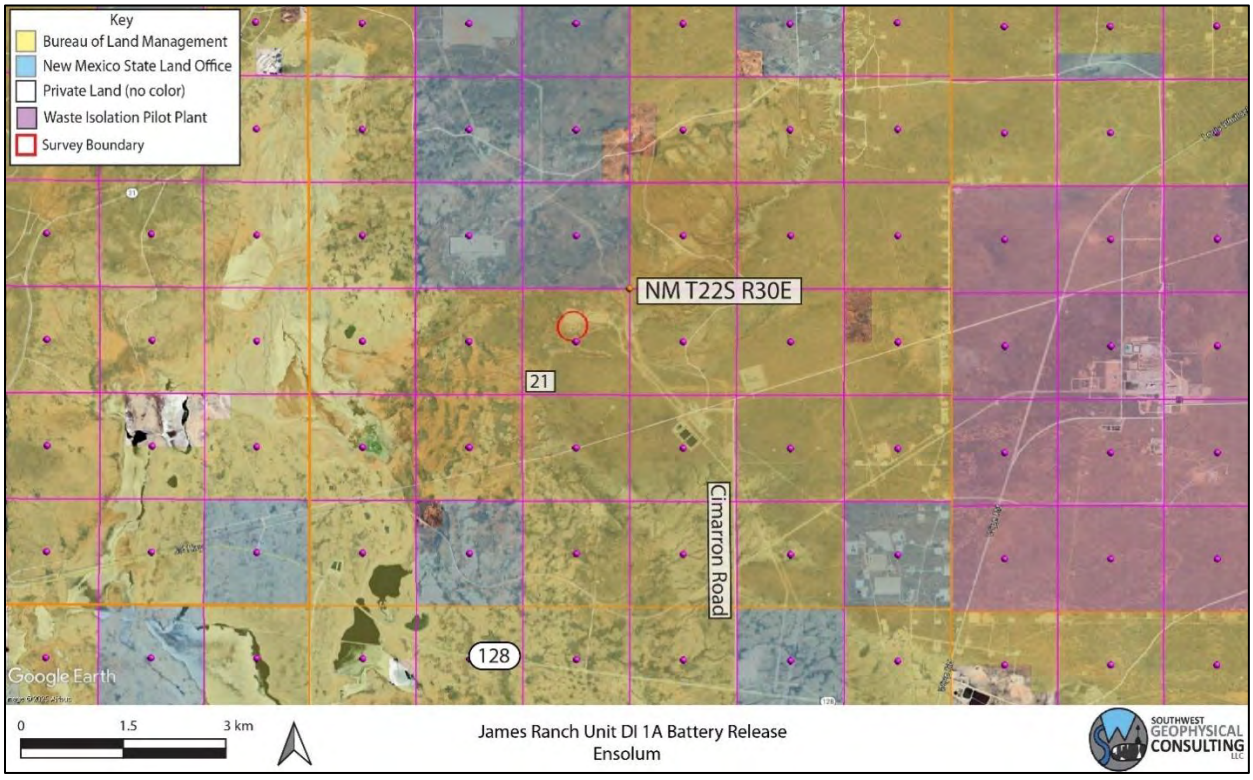

Figure 2: Land ownership and PLSS overview. Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

2.2 Local Geology Summary

The site for the JRU1A8 survey is located east of Nash Draw at an elevation of 965 meters (3,163 feet), ± 3 meters (9.8 feet). This region is entirely underlain by the Permian Rustler Formation (Pru). The area is mantled by thin gypsiferous soils (gypsite), Quaternary eolian deposits (Qe), and piedmont gravels (Qp)[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].

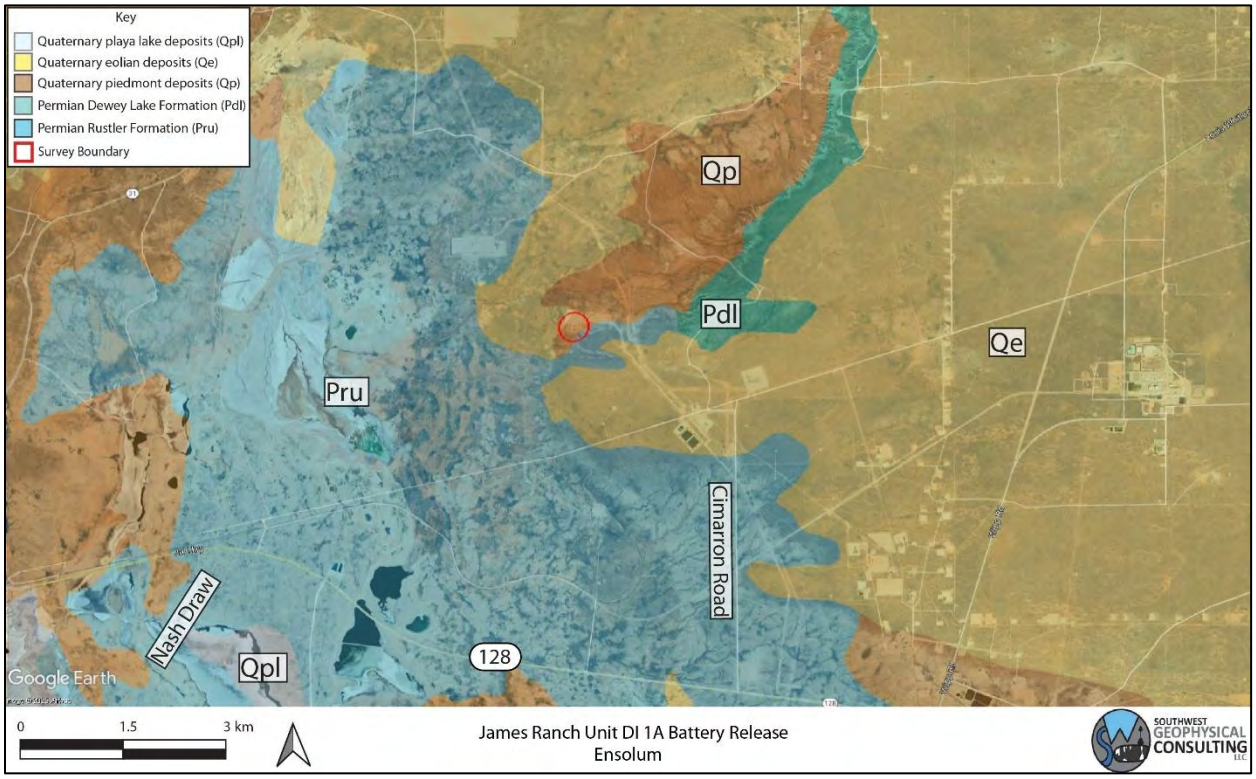

Figure 3: Geology overview. Geology map credit: The Digital Geologic Map of New Mexico in ARC/INFO Format. Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

2.3 Description of Survey

2.3.1 Surface Karst Inventory

Southwest Geophysical Consulting, in partnership with SWCA Environmental Consultants, provides aerial 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 aerial karst survey includes a surface karst 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 December 23, 2024[15]; the Tower Hill South, 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 two previously recorded medium-likelihood karst features within the 305-meter survey boundary. These features can be identified by the feature ID dates earlier than that of this survey in **Table 3.**

Aerial karst surveys are conducted 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].

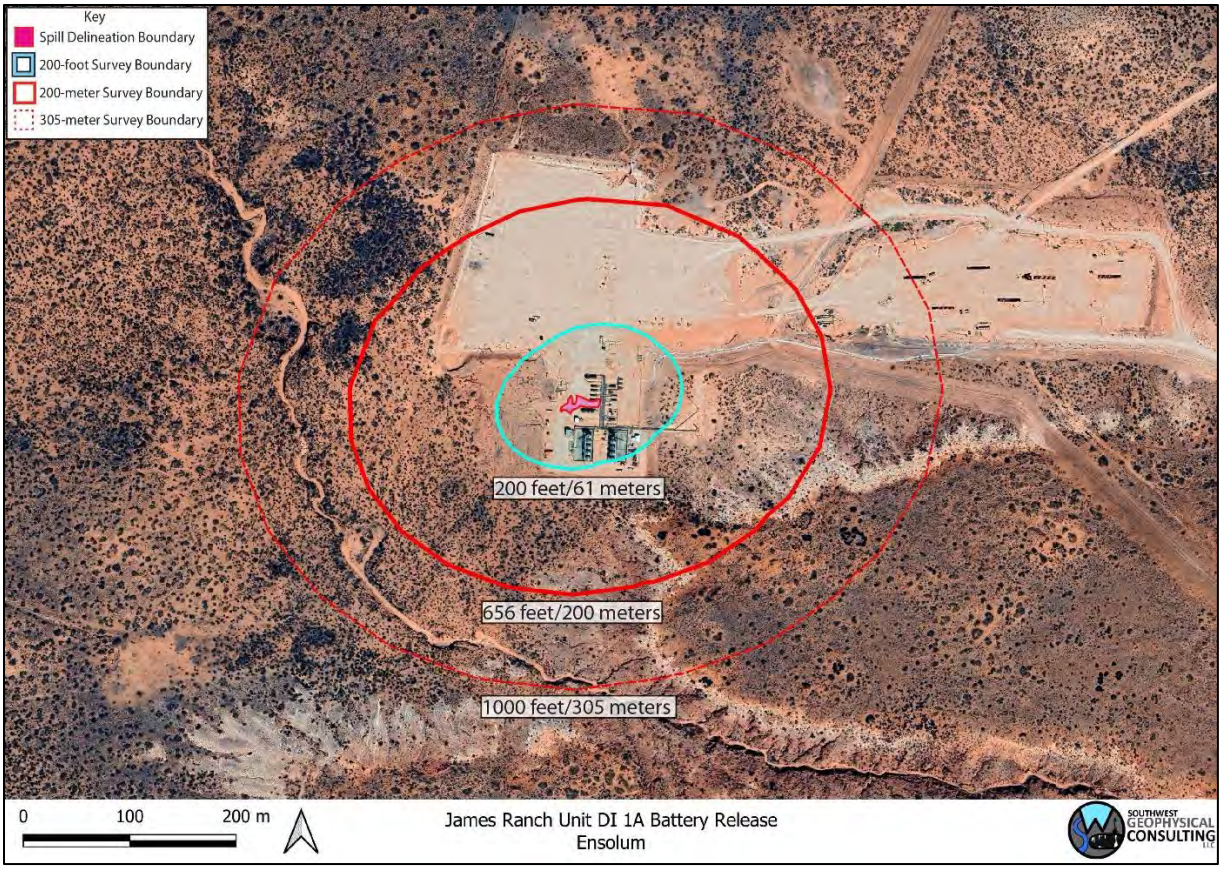

Figure 4: Surface survey overview. Background image credit: Google Earth. Image date: April 2, 2023. Datum: WGS-84.

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 March 10, 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 April 1, 2025.

2.3.2 Geophysical Survey

For this survey, an Advanced Geosciences Inc. (AGI) SuperSting™ Wifi R8 with a multi-electrode switchbox, a 28-electrode array of 40-centimeter-long electrodes, and a tablet controller were used to image the subsurface. This survey consisted of two resistivity lines in a dipole-dipole strong-gradient configuration; line one is laid out west to east while line two is laid out south to north. Both lines consisted of 28 electrodes at 5-meter spacing, resulting in 135-meter-long arrays (**Figure 5**, **Table 1**). A preconfigured command file was used to run the data collection (DDSG28). This electrode configuration provided a depth of investigation of 27 meters (89 feet) and a resolution of 2.5 to 3.0 meters (8.2 to 9.8 feet) within the first 5 to 8 meters (16 to 26 feet) from the surface. A Leica GS18 GPS was used to record electrode locations and elevations.

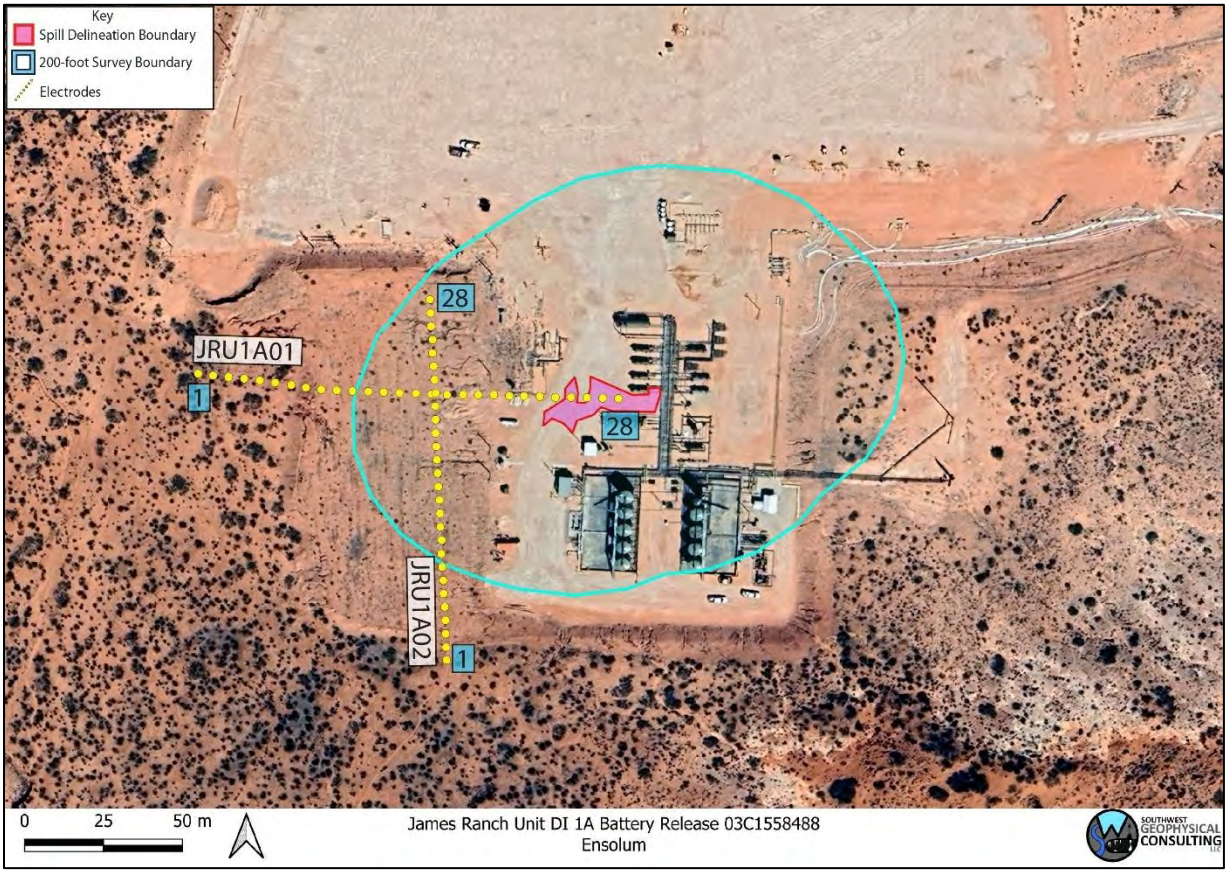

Figure 5: Geophysical survey overview. Two survey lines were conducted with 28 electrodes each at 5-meter spacing (yellow dots denoted with blue numbers). Background image credit: Google Earth. Image date: April 2, 2023. Image datum: WGS-84.

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 JRU1A8 _ERI_Points.xlsx and ENS-004-20250205_JRU1A8_Data_Files.kmz.

File Name:	Completed By:	Date:
JRU1A01.kmz	Garrett Jorgensen Olague – Senior Field Geologist Britt Bommer – Field Geologist Kat Knight – Field Geologist	3/27/2025
JRU1A02.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 Kat Knight on March 27, 2025.

3.0 RESULTS

3.1 Surface Karst Survey

The desk study and surface karst survey showed no surface karst features within the 200-foot (61-meter)[1] survey area surrounding the spill delineation boundary (**Figure 6**).

Two medium-likelihood surface karst features are located within the 305-meter survey boundary, but outside of the 200-meter aerial karst survey boundary (**Figure 6**, **Table 3**). Medium-likelihood surface karst features are ambiguous in aerial imagery and should be field-checked for verification if they impact remediation activities.

Both of these features are tentatively identified as springs, but are most likely associated with soil piping. Both exist within the 1,000-foot (305-meter)[1] survey boundary. These features need to be checked and verified in the field prior to using this information for decisions related to remediation efforts.

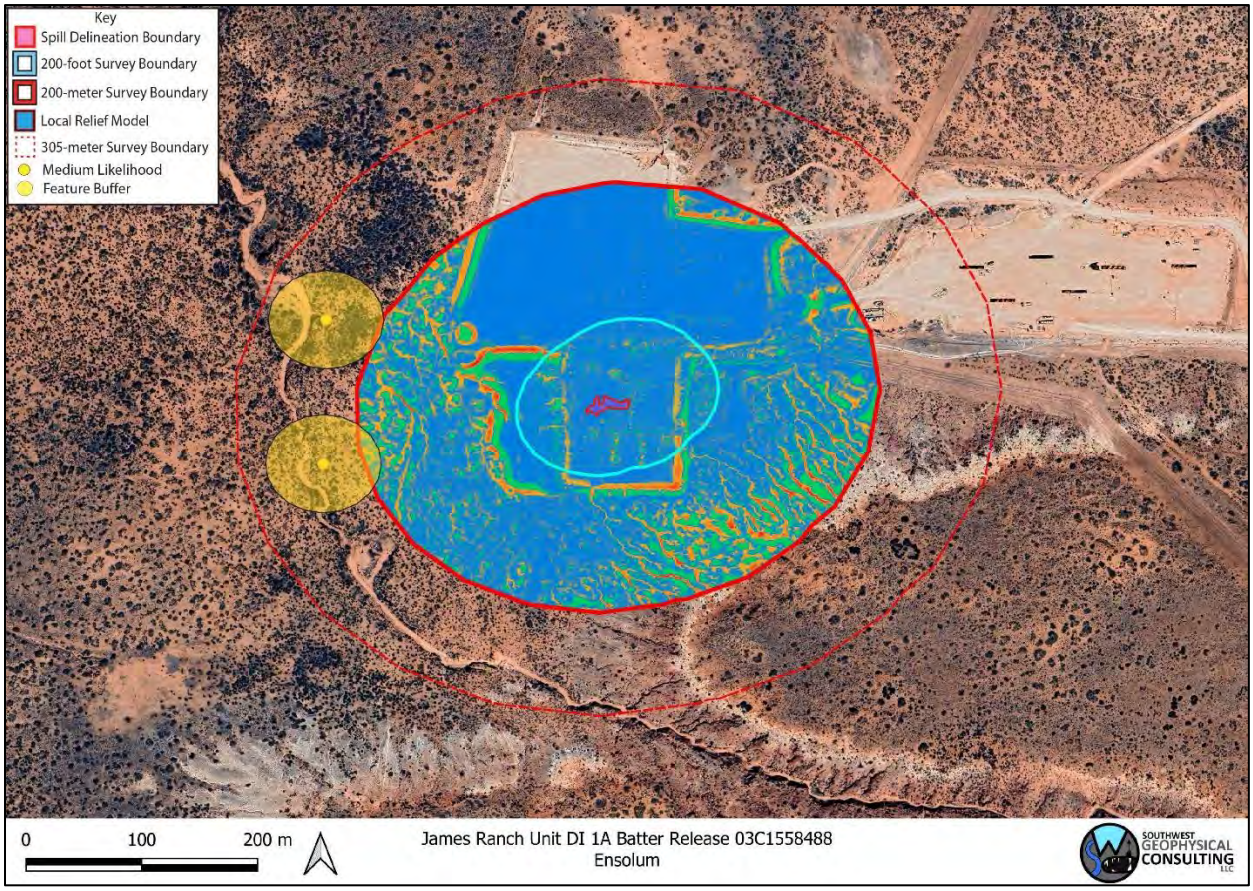

Figure 6: Surface karst survey results. Background image credit: Google Earth. Image date: March 20, 2023. Image datum: WGS-84.

Caution should be exercised while operating in or around all karst-related features due to the possibility of near-surface voids. Employing a BLM-CFO approved karst monitor on site during these activities should be considered.

Table 3 contains a list of features identified during the aerial karst survey and subsequent imagery analysis. Each feature is identified with a feature identification number (Feature ID), the type of feature, estimated size (in meters), recommended buffer (in meters), the likelihood of this feature being a surface karst feature (modifiers H/M for high or medium likelihood, V for field verified), and its location in WGS-84/UTM-13 (EPSG: 32613).

Table 3: Surface Karst Feature Data Table

KF Status	Feature ID	Type	Size (m)	Buffer (m)	Modifier	Easting	Northing
PKF	240130-D04	Spring	4.2	50	M	604458.854	3583159.060
PKF	240130-D05	Spring	1.6	50	M	604458.016	3583012.644

NOTE: Location data provided in WGS-84/UTM 13N. PKF – possible karst feature.

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 6.7 and 415 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.

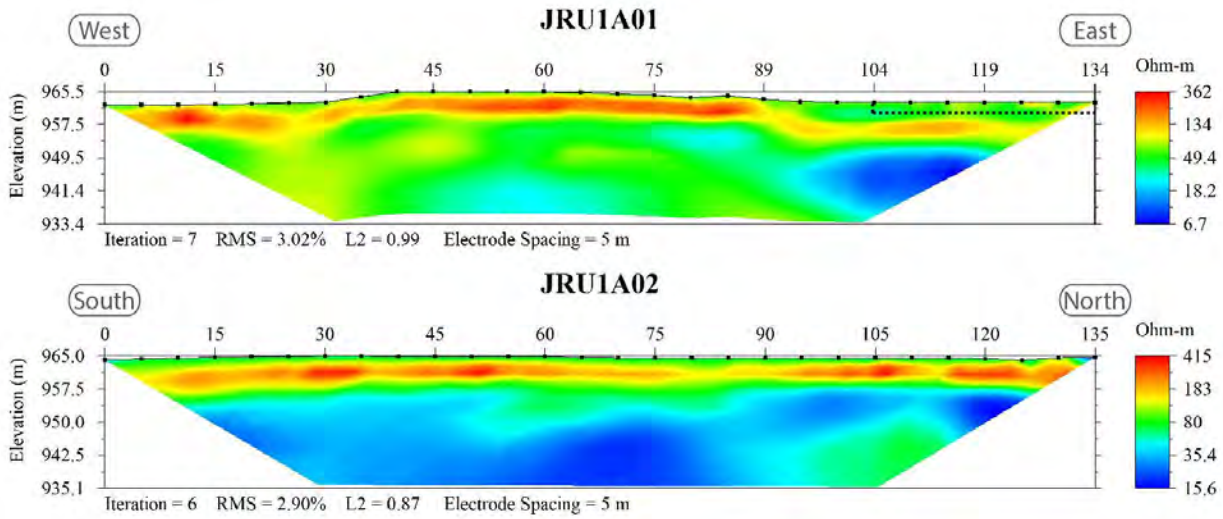

Figure 7: 2D inverted resistivity sections. Reds and oranges indicate higher resistivity values. Yellows and greens are medium-resistivity values. Blues are low-resistivity values. Please note that the color scale is relative. The dashed black line indicates the location of the well pad.

4.0 DISCUSSION

No anomalies consistent with air-filled subsurface voids are found within the JRU1A8 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. Slightly higher-than-average resistivity areas less than 10 meters beneath the surface are interpreted as dry caliche or gypsite soils. Due to their low resistivity values when compared with significant subsurface voids, these features should not be a concern during remediation efforts. Areas of moderate resistivity (yellows, and greens) near the surface are interpreted as dry gypsite soils and gypsum bedrock of the Rustler Formation[17] (**Figure 7** and **Figure 8**).

The low-resistivity areas between 6.7 – 30 Ohm-m are interpreted as a layer of either clays and halite lenses or moist or 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.

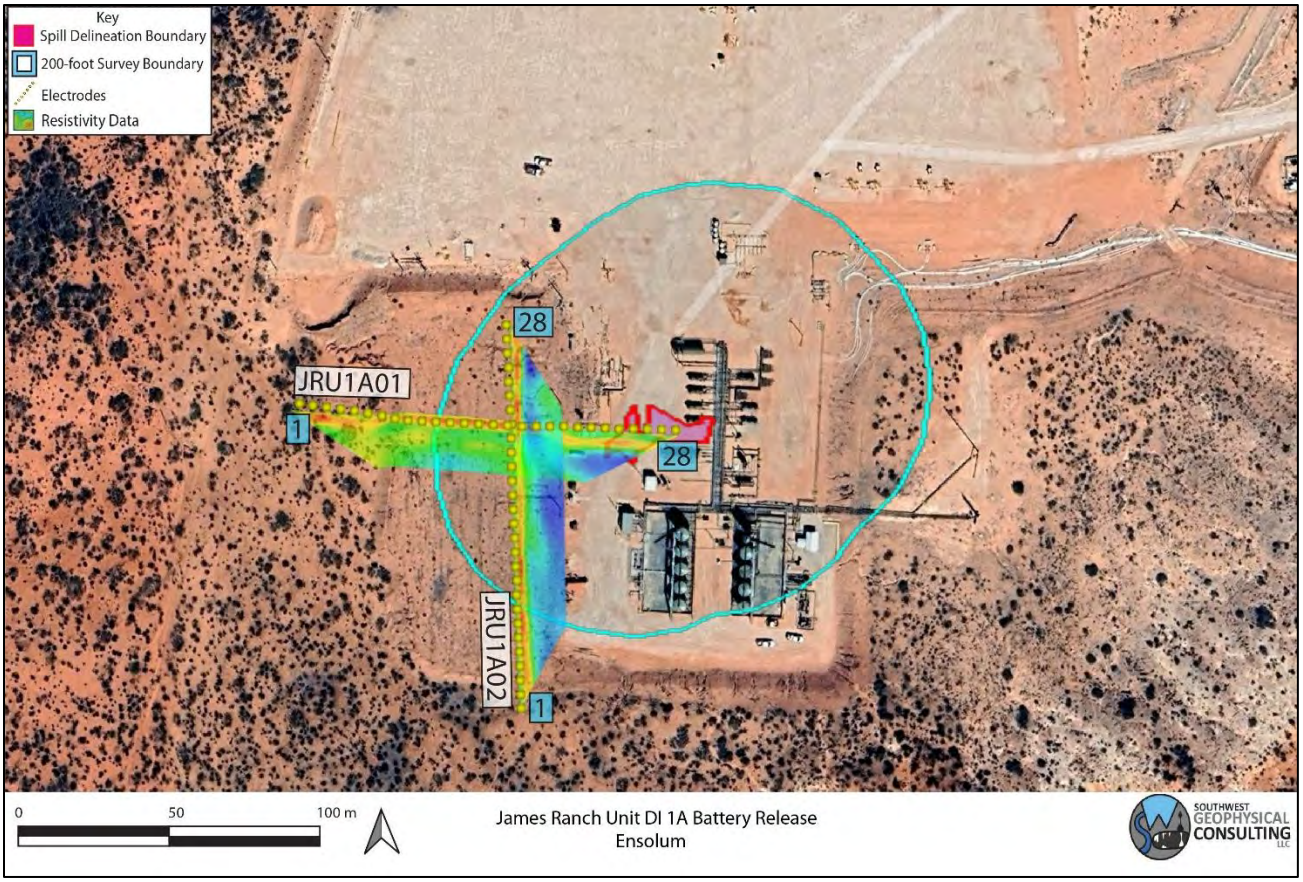

Figure 8: Data overlay. Colored trapezoids are the 2D inverted resistivity line. Background image credit: Google Earth. Image date: April 2, 2023.

5.0 SUMMARY

- **The JRU1A8 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 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 area where the geophysical survey was conducted, indicating stable ground.**
- When conducting any remediation activities in this area, employing a BLM-CFO approved karst monitor on site should be considered.

6.0 DISCLOSURE STATEMENT

High 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 commissioned at the request of the land manager should be submitted to:

BLM-CFO: blm_nm_karst@blm.gov

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

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-005-20250205 entitled, “Environmental Karst Study Report, James Ranch Unit DI 1A Battery Release, 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, April 10, 2025.

David D. Decker
PhD, CPG-12123

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Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 457850

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 457850
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2421529493**
Incident Name	**NAPP2421529493 JAMES RANCH UNIT DI 1A BATTERY @ 0**
Incident Type	**Produced Water 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 1A BATTERY
Date Release Discovered	07/26/2024
Surface Owner	Federal

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

Nature and Volume of Release *Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.*	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Other (Specify) | Produced Water | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
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)	Leak was located on a tester 4" T

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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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: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 10/24/2024

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 457850
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 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)	8600
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	77.4
GRO+DRO	(EPA SW-846 Method 8015M)	77.4
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence		10/30/2024
On what date will (or did) the final sampling or liner inspection occur		11/30/2024
On what date will (or was) the remediation complete(d)		12/05/2024
What is the estimated surface area (in square feet) that will be reclaimed		3450
What is the estimated volume (in cubic yards) that will be reclaimed		300
What is the estimated surface area (in square feet) that will be remediated		3450
What is the estimated volume (in cubic yards) that will be remediated		300
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)

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	Action Number: 457850
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 05/01/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 457850
	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: 457850
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**422035**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**01/21/2025**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**800**

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	3540
What was the total volume (cubic yards) remediated	300
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	3540
What was the total volume (in cubic yards) reclaimed	300
Summarize any additional remediation activities not included by answers (above)	The results of the karst survey confirm there is no imminent risk to groundwater at the Site based on the absence of any visible karst features through desktop and pedestrian surveys and absence of any anomalies observed through the geophysical survey to indicate voids. The absence of karst features beneath the Site indicates the subsurface is stable and there is no imminent threat to human health, the environment, or groundwater, which eliminates the sensitive receptor as it relates to the Site. As such, based on initial response efforts, removal of impacted soil to the MEP, and full delineation of the release to the strictest Closure Criteria, XTO requests remediation closure approval for Incident Number NAPP2421529493. Waste-containing soil identified in the inaccessible area will be removed at the time of final reclamation of the well pad or major construction, whichever comes first.

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: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 05/01/2025

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QUESTIONS (continued)

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	Action Number: 457850
	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: 457850
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scwells	Remediation closure approved based on depth to groundwater closure criteria. When this site has been plugged and abandoned or is no longer reasonably needed for production, it will need to meet the requirements of 19.15.29.13 NMAC.	5/22/2025