

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: <b>Enterprise Field Services, LLC</b>	OGRID: <b>241602</b>
Contact Name: <b>Thomas Long</b>	Contact Telephone: <b>505-599-2286</b>
Contact email: <b>tjlong@eprod.com</b>	Incident # (assigned by OCD) <b>nAPP2232045496</b>
Contact mailing address: <b>614 Reilly Ave, Farmington, NM 87401</b>	

### Location of Release Source

Latitude **36.783389** Longitude **-108.017820** (NAD 83 in decimal degrees to 5 decimal places)

Site Name <b>Lateral 3B-12</b>	Site Type <b>Natural Gas Gathering Pipeline</b>
Date Release Discovered: <b>11/16/2022</b>	Serial Number (if applicable): <b>N/A</b>

Unit Letter	Section	Township	Range	County
<b>F</b>	<b>29</b>	<b>30N</b>	<b>11W</b>	<b>San Juan</b>

Surface Owner:  State  Federal  Tribal  Private (Name: **BLM**)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls): <b>5-10 BBLS</b>	Volume Recovered (bbls): <b>None</b>
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf): <b>2.73 MCF</b>	Volume Recovered (Mcf): <b>None</b>
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

**Cause of Release:** On November 10, 2022, Enterprise had a release of natural gas and natural gas liquids from the Lateral 3B-12 pipeline. The pipeline was isolated, depressurized, locked and tagged out. Approximately two barrels of release liquids were observed on the ground surface. No emergency services responded. No fire nor injuries occurred. No washes/waterways were affected. On November 16, 2022, Enterprise initiated remediation activities and determined the release was reportable due to the volume of impacted soil. The remediation was completed on November 17, 2022. The final excavation dimensions measured approximately 27 feet long by 12 feet wide by 8 feet deep. A total of 124 cubic yards of hydrocarbon impacted soil was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm. A third party closure report is included with this "Final." C-141.

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

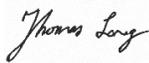
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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.

Printed Name: Thomas Long Title: Senior Environmental Scientist

Signature:  Date: 6-12-2023

email: tjlong@eprod.com Telephone: (505) 599-2286

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 06/13/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv



# ENSOLUM

## CLOSURE REPORT

Property:

**Lateral 3B-12 (11/16/22)**  
Unit Letter F, S29 T30N R11W  
San Juan County, New Mexico

**New Mexico EMNRD OCD Incident ID No. NAPP2232045496**

**January 6, 2023**

Ensolum Project No. 05A1226221

Prepared for:

**Enterprise Field Services, LLC**  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Thomas Long

Prepared by:

Raneet Deechilly  
Project Manager

Kyle Summers  
Senior Managing Geologist

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## 1.0 INTRODUCTION

### 1.1 Site Description & Background

<b>Operator:</b>	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
<b>Site Name:</b>	Lateral 3B-12 (11/16/22) (Site)
<b>NM EMNRD OCD Incident ID No.</b>	NAPP2232045496
<b>Location:</b>	36.78389° North, 108.01782° West Unit Letter F, Section 29, Township 30 North, Range 11 West San Juan County, New Mexico
<b>Property:</b>	United States Bureau of Land Management (BLM)
<b>Regulatory:</b>	New Mexico (NM) Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On November 10, 2022, Enterprise identified a release of natural gas from the Lateral 3B-12 pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On November 16, 2022, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact. Additionally, Enterprise determined the release was “reportable” due to the estimated volume of impacted soil. The NM EMNRD OCD was subsequently notified.

A **Topographic Map** depicting the location of the Site is included as **Figure 1**, and a **Site Vicinity Map** is included as **Figure 2** in **Appendix A**.

### 1.2 Project Objective

The primary objective of the closure activities was to reduce constituent of concern (COC) concentrations in the on-site soils to below the applicable NM EMNRD OCD closure criteria.

## 2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases*, which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action, during the evaluation and remediation of the Site. The appropriate closure criteria for sites are determined using the siting requirements outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Ensolum utilized the general site characteristics and information available from NM state agency databases and federal agency geospatial databases to determine the appropriate closure criteria for the Site. Supporting figures and documentation associated with the following Siting bullets are provided in **Appendix B**.

- The NM Office of the State Engineer (OSE) tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). Numerous PODs with recorded depths to water were identified in adjacent Public Land Survey System (PLSS) sections (**Figure A, Appendix B**). The documented depth to water for these PODs varies from 5 feet below grade surface (bgs) to 340 feet bgs. The closest POD (SJ-04201-POD1) is located approximately 0.64 miles northwest of the Site and is approximately 96 feet lower in elevation than the Site. The recorded depth to water for this POD is 340 feet bgs.

- Five cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the adjacent PLSS sections. These CPWs are depicted on **Figure B (Appendix B)**. Documentation for the cathodic protection well located near the Morris Com #101 well location indicates a “seep” at approximately 100 feet bgs. This cathodic protection well is located approximately 0.95 miles northeast of the Site and is approximately 20 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Morris Com #100 well location indicates a depth to water of approximately 340 feet bgs. This cathodic protection well is located approximately 1 mile east of the Site and is approximately 110 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Morris A #6 well location indicates a depth to water of approximately 140 feet bgs. This cathodic protection well is located approximately 1.2 miles northeast of the Site and is approximately 2 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Fifield #4 well location indicates a depth to water of approximately 100 feet bgs. This cathodic protection well is located approximately 1.4 miles northeast of the Site and is approximately 36 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Fed State Com “A” #1 well location indicates a depth to water of approximately 150 feet bgs. This cathodic protection well is located approximately 1.4 miles south of the Site and is approximately 120 feet higher in elevation than the Site.
- The Site is located within 300 feet of a NM EMNRD OCD-defined continuously flowing watercourse or significant watercourse (**Figure C, Appendix B**).
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.
- The Site is not located within 300 feet of a permanent residence, school, hospital, institution, or church (**Figure D, Appendix B**).
- No springs, or private domestic freshwater wells used by less than five households for domestic or stock watering purposes were identified within 500 feet of the Site (**Figure E, Appendix B**).
- No freshwater wells or springs were identified within 1,000 feet of the Site (**Figure E, Appendix B**).
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3.
- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is not within 300 feet of a wetland (**Figure F, Appendix B**).
- Based on information identified in the NM Mining and Minerals Division’s Geographic Information System (GIS) Maps and Mine Data database, the Site is not within an area overlying a subsurface mine (**Figure G, Appendix B**).
- The Site is not located within an unstable area per Paragraph (6) of Subsection U of 19.15.2.7 NMAC.
- Based on information provided by the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not within a 100-year floodplain (**Figure H, Appendix B**).

Based on available information, the applicable closure criteria for soils remaining in place at the Site include:

Tier I Closure Criteria for Soils Impacted by a Release		
Constituent <sup>1</sup>	Method	Limit
Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
TPH (GRO+DRO+MRO) <sup>2</sup>	EPA SW-846 Method 8015	100 mg/kg
BTEX <sup>3</sup>	EPA SW-846 Method 8021 or 8260	50 mg/kg
Benzene	EPA SW-846 Method 8021 or 8260	10 mg/kg

<sup>1</sup> – Constituent concentrations are in milligrams per kilogram (mg/kg).

<sup>2</sup> – Total Petroleum Hydrocarbons (TPH). Gasoline Range Organics (GRO). Diesel Range Organics (DRO). Motor Oil/Lube Oil Range Organics (MRO).

<sup>3</sup> – Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX).

### 3.0 SOIL REMEDIATION ACTIVITIES

On November 16, 2022, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities, OFT Construction Inc, provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final pipeline excavation measured approximately 27 feet long and 12 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 8 feet bgs. The flow path excavation measured approximately 179 feet long and 2 feet wide at the maximum extents, with a depth of approximately 1 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of silty sand and silty clay.

Approximately 124 cubic yards (yd<sup>3</sup>) of petroleum hydrocarbon-affected soils and 55 barrels (bbls) of hydro-excavation soil cuttings and water were transported to the Envirotech, Inc., (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix C**. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

**Figure 3** is a map that identifies approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix A**). Photographic documentation of the field activities is included in **Appendix D**.

### 4.0 SOIL SAMPLING PROGRAM

Ensolum field screened the soil samples from the excavation utilizing a calibrated Dexsil PetroFLAG<sup>®</sup> hydrocarbon analyzer system and a photoionization detector (PID) fitted with a 10.6 eV lamp to guide excavation extents.

Ensolum's soil sampling program included the collection of nine composite soil samples (S-1 through S-5 and FP-1 through FP-4) from the excavations for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft<sup>2</sup>) sample area or less per guidelines outlined in Section D of 19.15.29.12 NMAC. Hand tools were utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

### **Sampling Event**

On November 17, 2022, sampling was performed at the Site. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil sample S-1 (8') was collected from the floor of the excavation. Composite soil samples S-2 (0'-8'), S-3 (0'-8'), S-4 (0'-8'), and S-5 (0'-8') were collected from the walls of the excavation. Composite soil samples FP-1 (0'-1'), FP-2 (0'-1'), FP-3 (0'-1'), and FP-4 (0'-1') were collected from the floor and walls of the flow path.

All soil samples were collected and placed in laboratory-prepared glassware. The containers were labeled and sealed using the laboratory-supplied labels and custody seals and were stored on ice in a cooler. The samples were relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, NM, under proper chain-of-custody procedures.

## **5.0 SOIL LABORATORY ANALYTICAL METHODS**

The composite soil samples were analyzed for BTEX using Environmental Protection Agency (EPA) SW-846 Method #8021; TPH GRO/DRO/MRO using EPA SW-846 Method #8015; and chlorides using EPA Method #300.0.

The laboratory analytical results are summarized in **Table 1 (Appendix F)**. The laboratory data sheets and executed chain-of-custody forms are provided in **Appendix G**.

## **6.0 SOIL DATA EVALUATION**

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1 through S-5 and FP-1 through FP-4) to the Tier I NM EMNRD OCD closure criteria. The laboratory analytical results are summarized in **Table 1 (Appendix F)**.

- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 10 mg/kg.
- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 50 mg/kg.
- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

## **7.0 RECLAMATION AND REVEGETATION**

The excavation was backfilled with imported fill and then contoured to the surrounding topography. Enterprise will re-seed the Site with an approved seeding mixture.

## 8.0 FINDINGS AND RECOMMENDATION

- Nine composite soil samples were collected from the Site. Based on laboratory analytical results for soils remaining at the Site, benzene, total BTEX, combined TPH GRO/DRO/MRO, and chloride concentrations are below the New Mexico EMNRD OCD closure criteria.
- Approximately 124 yd<sup>3</sup> of petroleum hydrocarbon-affected soils and 55 bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm for disposal/remediation. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

**Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

## 9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

### 9.1 Standard of Care

Ensolum's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information used in the report (e.g., laboratories, regulatory agencies, or other third parties).

### 9.2 Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work, and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings and recommendation are based solely upon data available to Ensolum at the time of these services.

### 9.3 Reliance

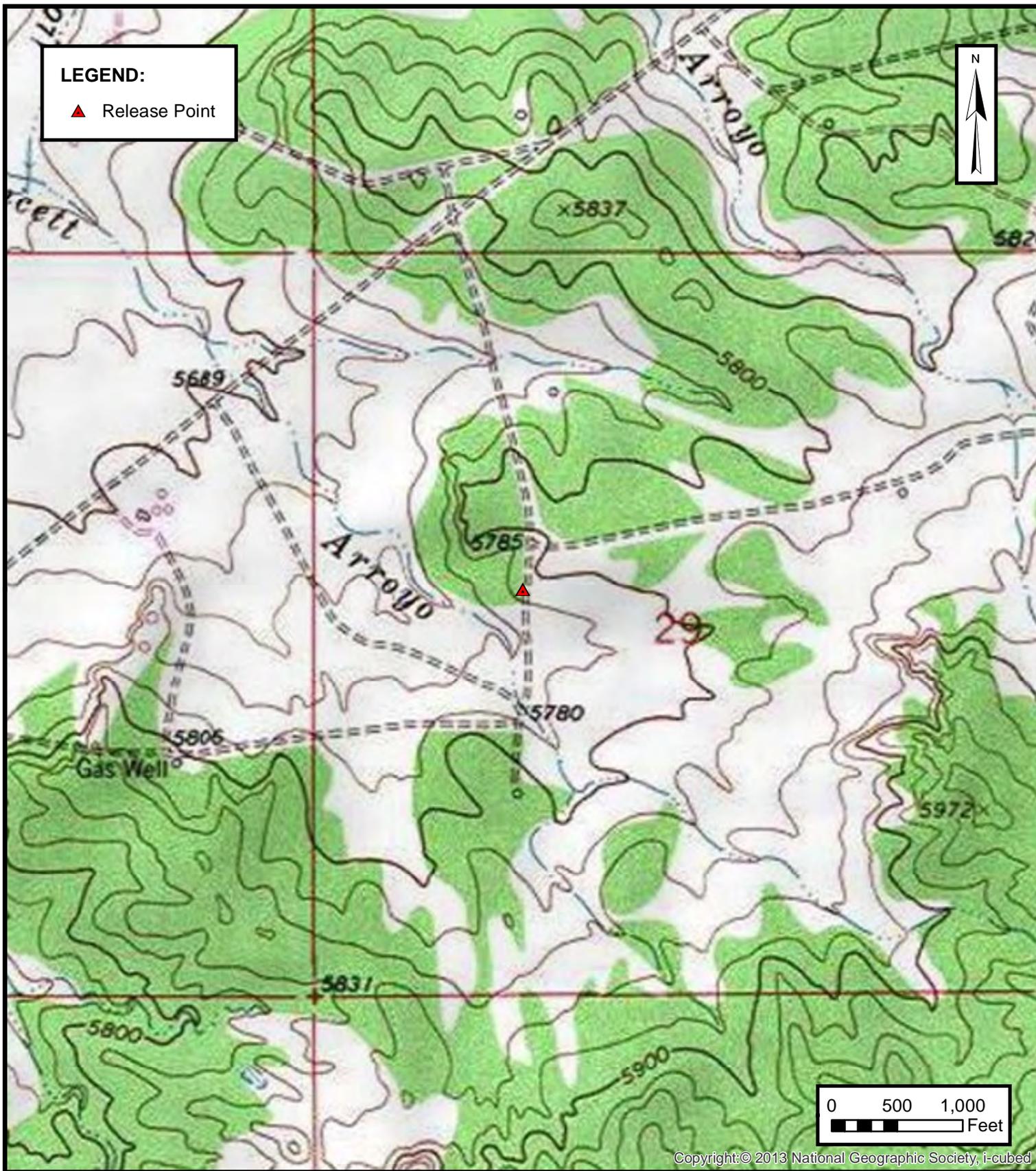
This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Enterprise and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the Closure Report and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.



# APPENDIX A

## Figures

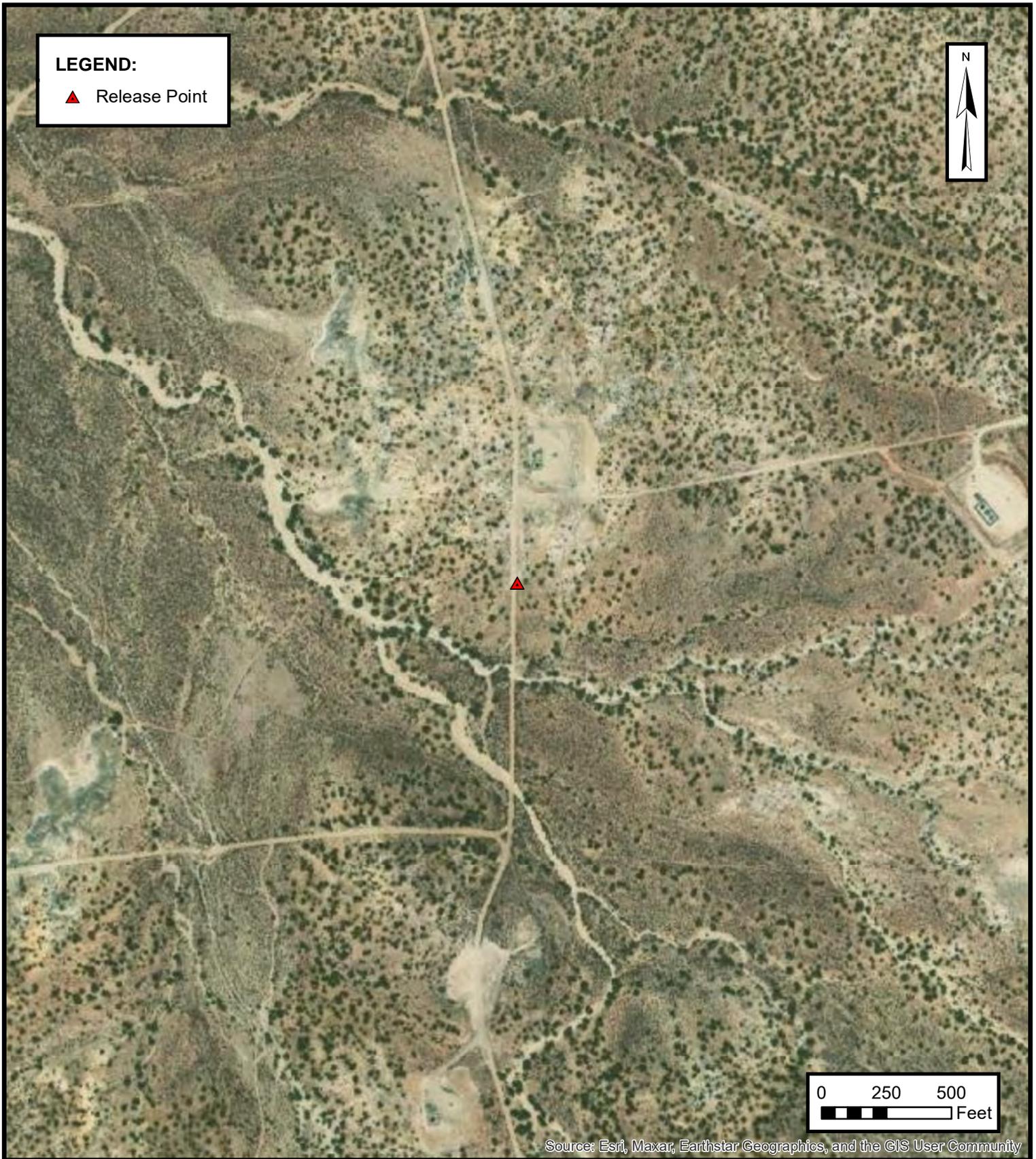
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Environmental, Engineering and  
Hydrogeologic Consultants

**TOPOGRAPHIC MAP**  
 ENTERPRISE FIELD SERVICES, LLC  
 LATERAL 3B-12 (11/16/22)  
 Unit Letter F, S29 T30N R11W, San Juan County, New MexicoÁ  
 36.78389° N, 108.01782° W  
 PROJECT NUMBER: 05A1226221

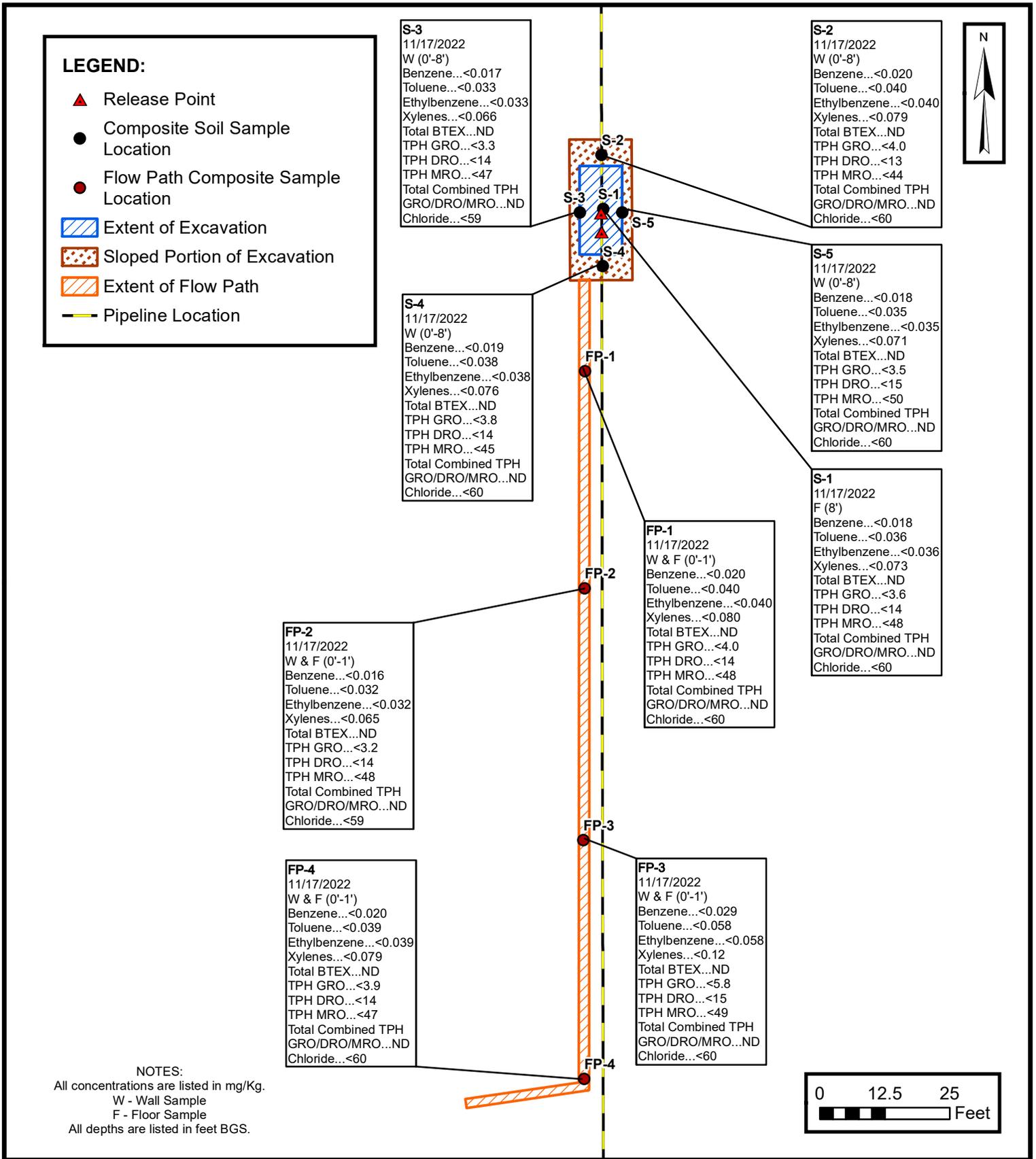
**FIGURE**  
**1**



**ENSOLUM**  
Environmental, Engineering and  
Hydrogeologic Consultants

**SITE VICINITY MAP**  
ENTERPRISE FIELD SERVICES, LLC  
LATERAL 3B-12 (11/16/22)  
Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
36.78389° N, 108.01782° W  
PROJECT NUMBER: 05A1226221

**FIGURE**  
**2**



**SITE MAP WITH SOIL ANALYTICAL RESULTS**

ENTERPRISE FIELD SERVICES, LLC  
LATERAL 3B-12 (11/16/22)  
Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
36.78389° N, 108.01782° W

PROJECT NUMBER: 05A1226221

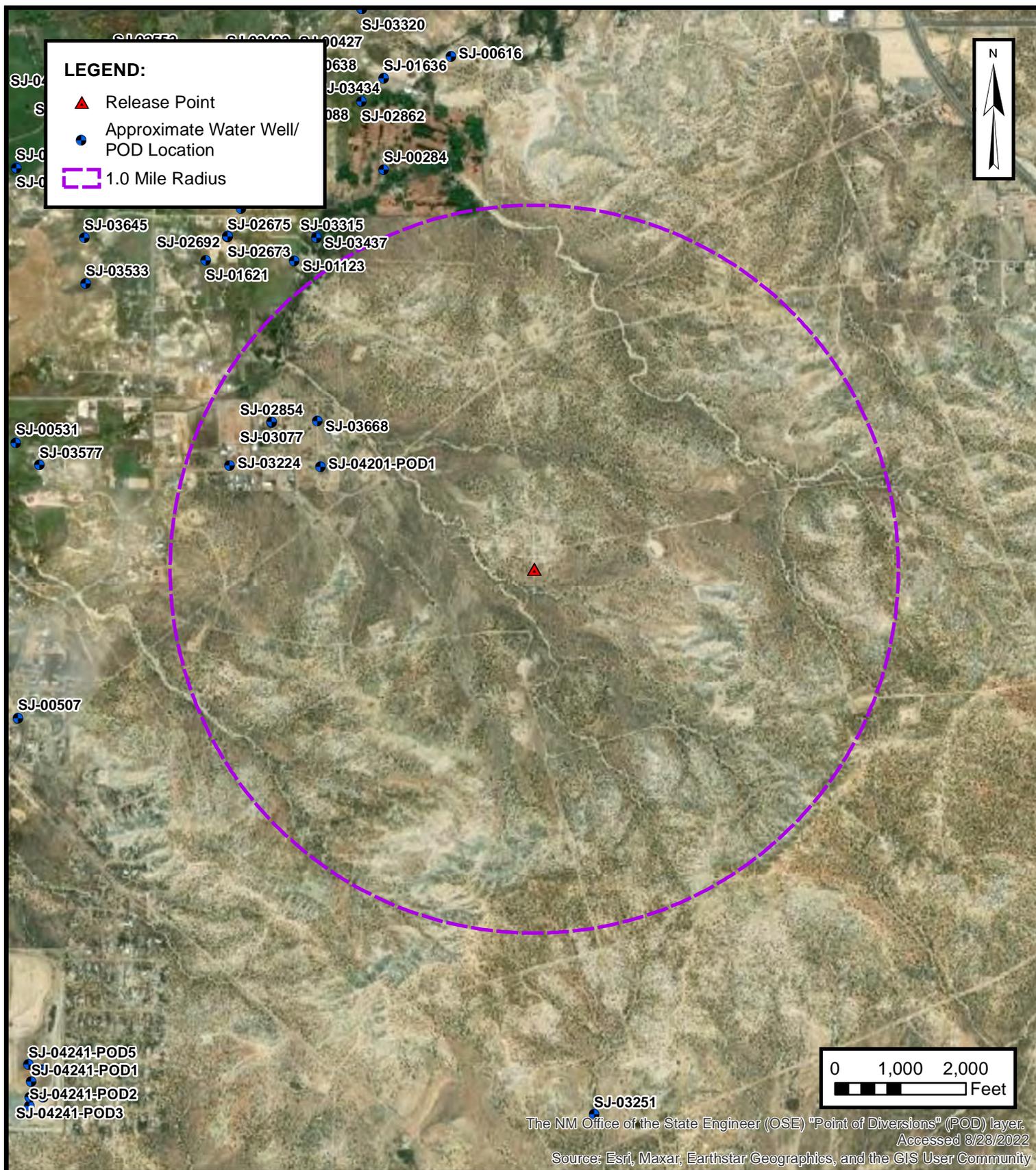
**FIGURE**  
**3**



## APPENDIX B

# Siting Figures and Documentation

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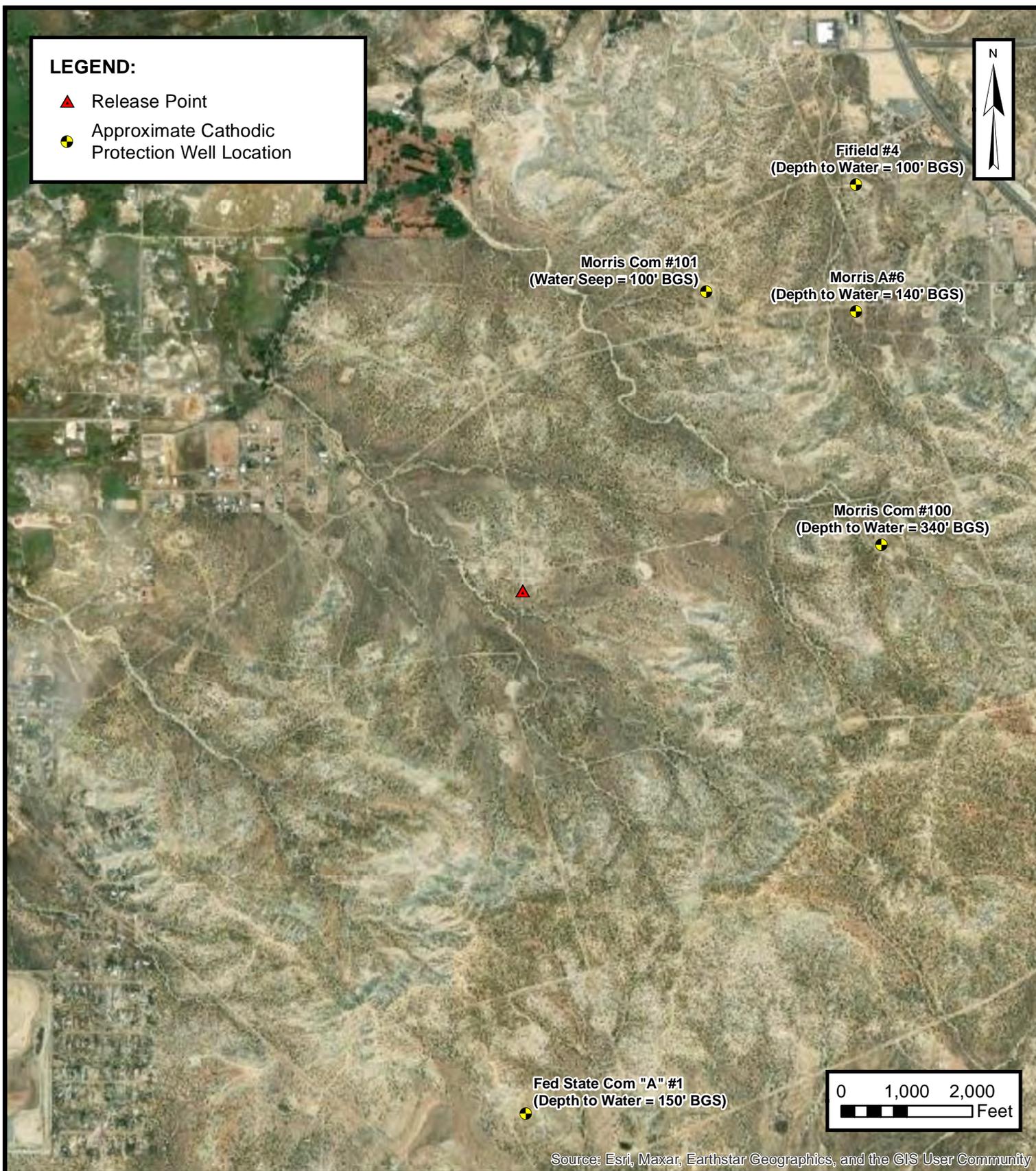
**1.0 MILE RADIUS WATER WELL/ POD LOCATION MAP**



ENTERPRISE FIELD SERVICES, LLC  
LATERAL 3B-12 (11/16/22)  
Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
36.78389° N, 108.01782° W

PROJECT NUMBER: 05A1226221

**FIGURE  
A**

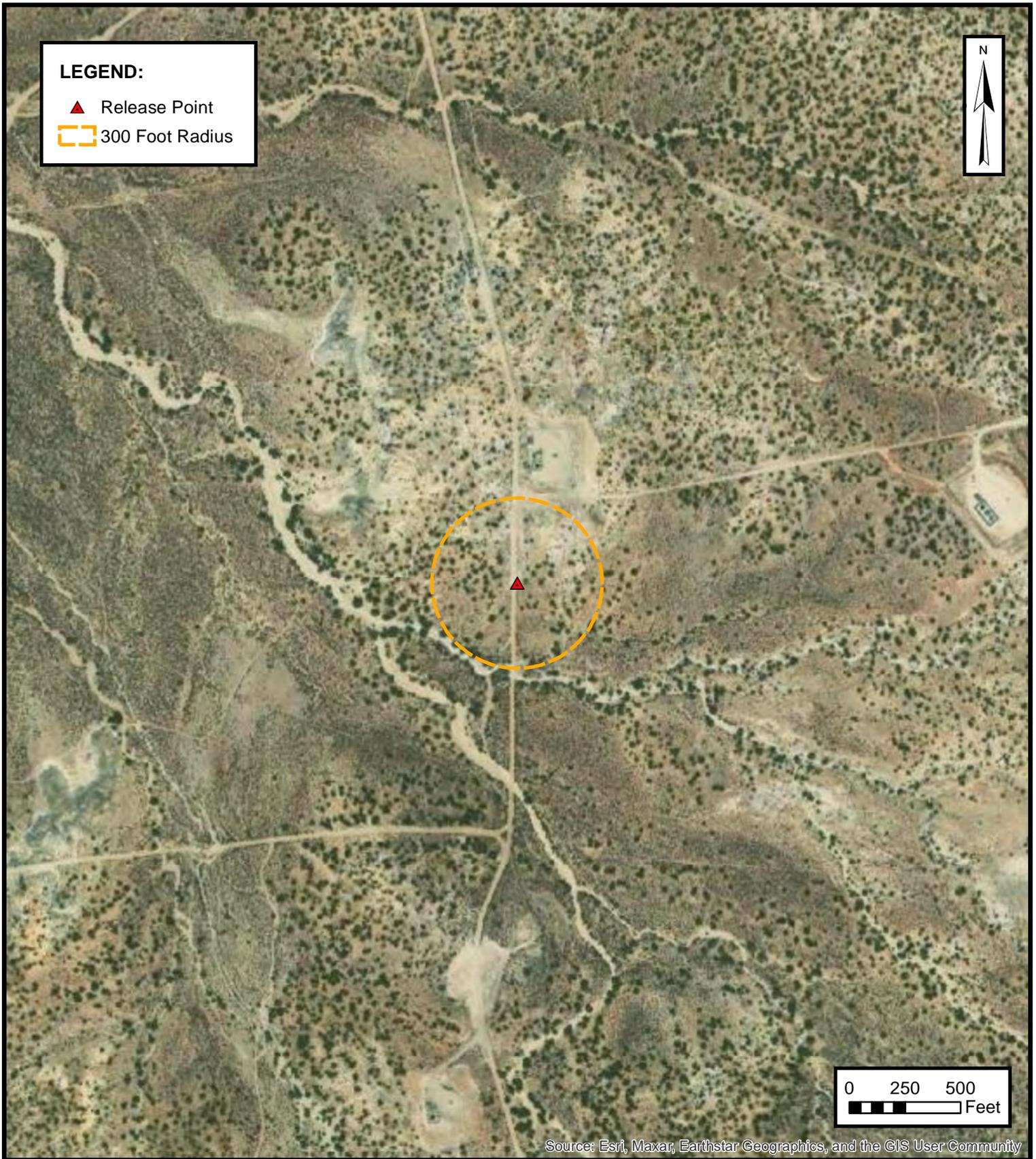


**CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER**

ENTERPRISE FIELD SERVICES, LLC  
 LATERAL 3B-12 (11/16/22)  
 Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
 36.78389° N, 108.01782° W

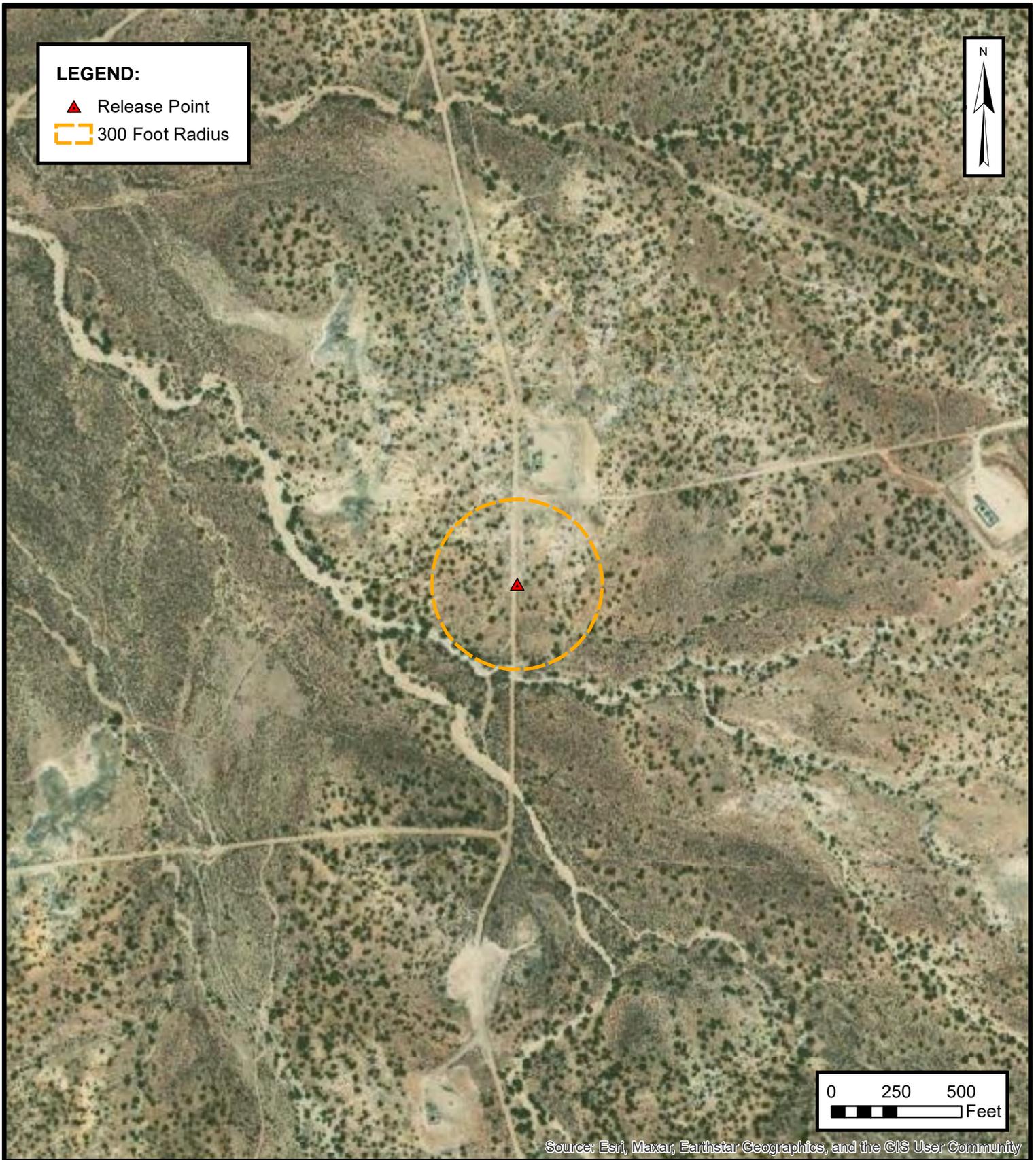
PROJECT NUMBER: 05A1226221

**FIGURE B**



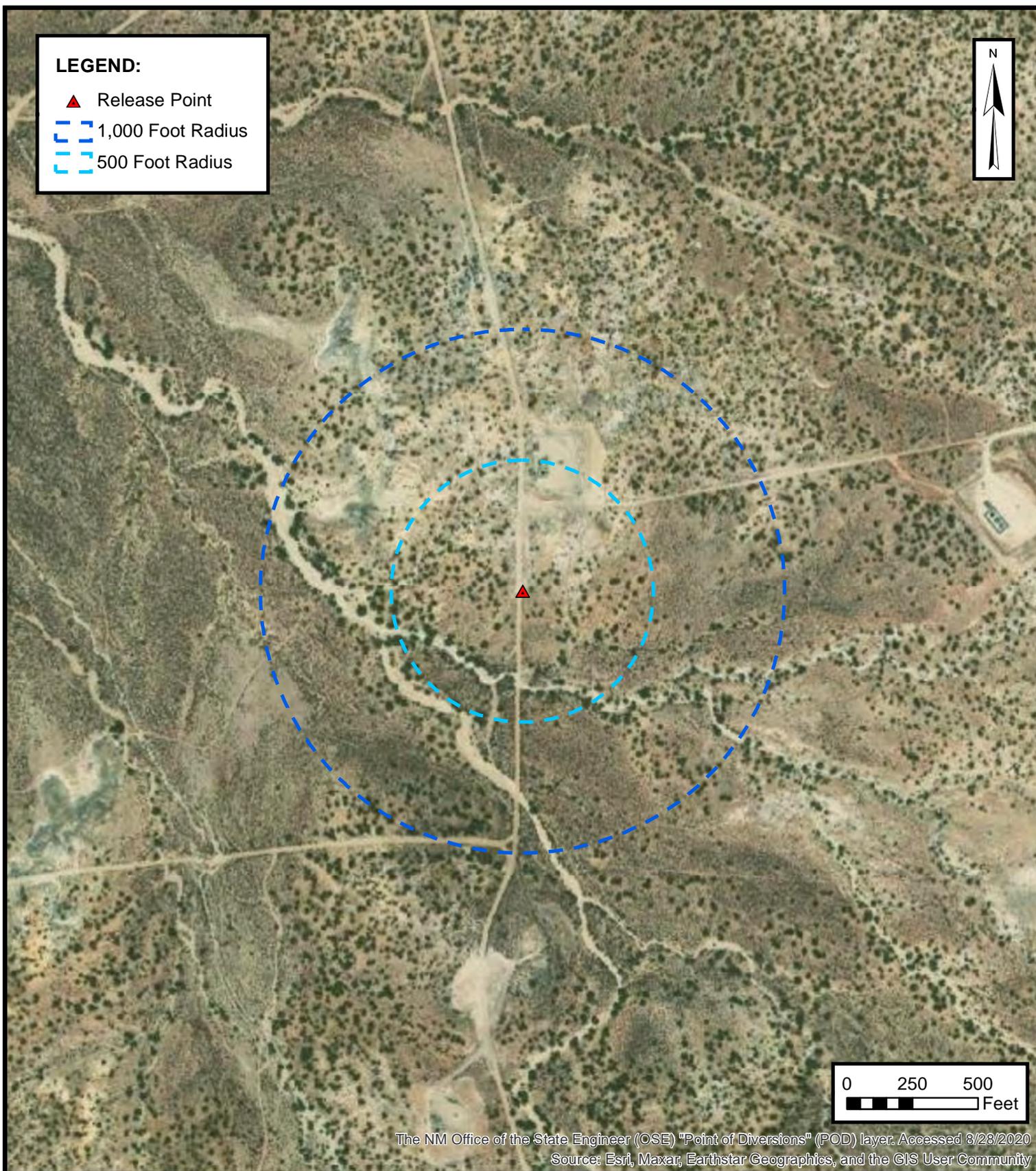
**300 FOOT RADIUS  
WATERCOURSE AND DRAINAGE IDENTIFICATION**  
ENTERPRISE FIELD SERVICES, LLC  
LATERAL 3B-12 (11/16/22)  
Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
36.78389° N, 108.01782° W  
PROJECT NUMBER: 05A1226221

**FIGURE  
C**



**300 FOOT RADIUS  
OCCUPIED STRUCTURE IDENTIFICATION**  
ENTERPRISE FIELD SERVICES, LLC  
LATERAL 3B-12 (11/16/22)  
Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
36.78389° N, 108.01782° W  
PROJECT NUMBER: 05A1226221

**FIGURE  
D**

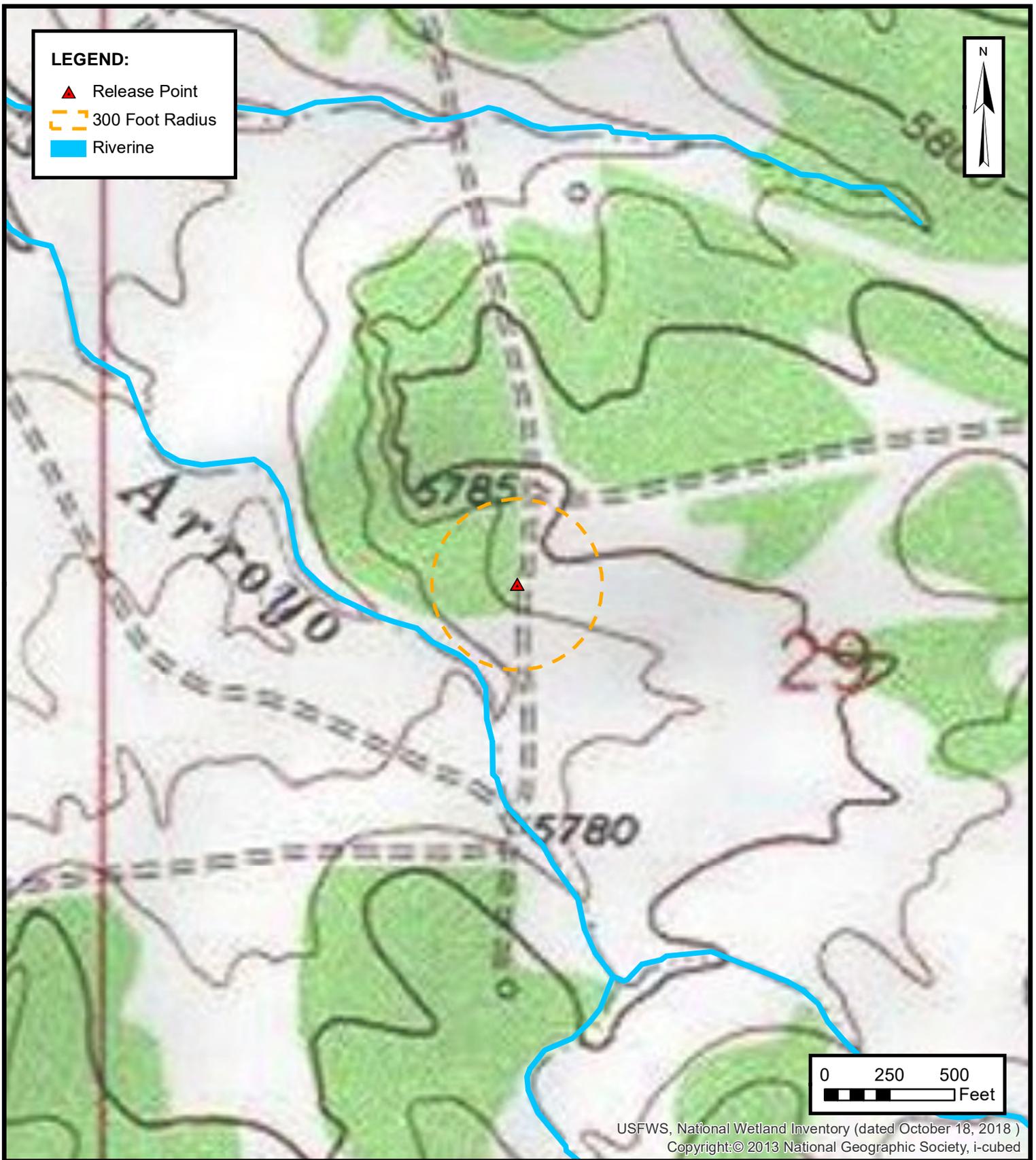


**WATER WELL AND NATURAL SPRING LOCATION**

ENTERPRISE FIELD SERVICES, LLC  
 LATERAL 3B-12 (11/16/22)  
 Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
 36.78389° N, 108.01782° W

PROJECT NUMBER: 05A1226221

**FIGURE**  
**E**

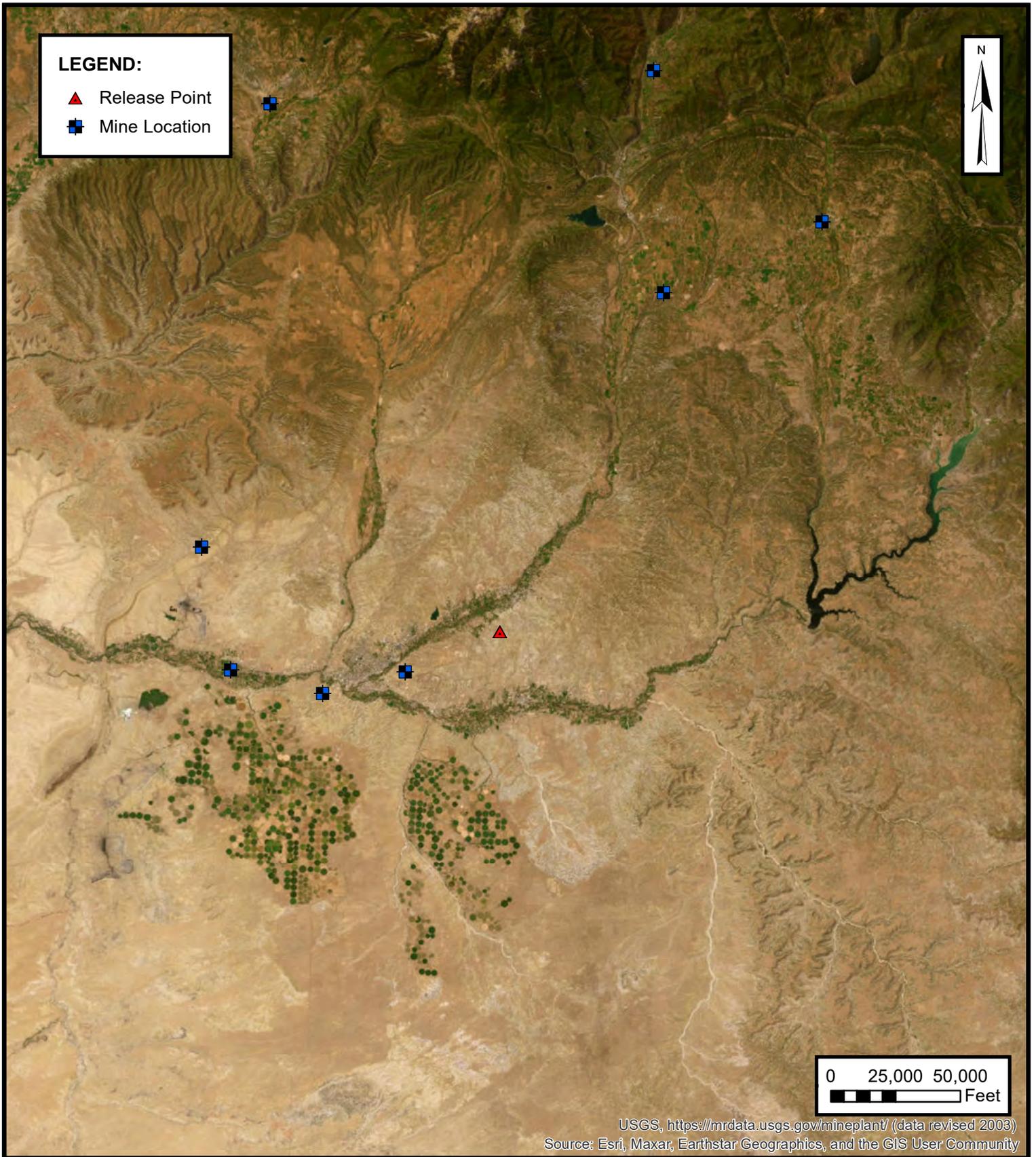


**WETLANDS**

ENTERPRISE FIELD SERVICES, LLC  
 LATERAL 3B-12 (11/16/22)  
 Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
 36.78389° N, 108.01782° W

PROJECT NUMBER: 05A1226221

**FIGURE**  
**F**



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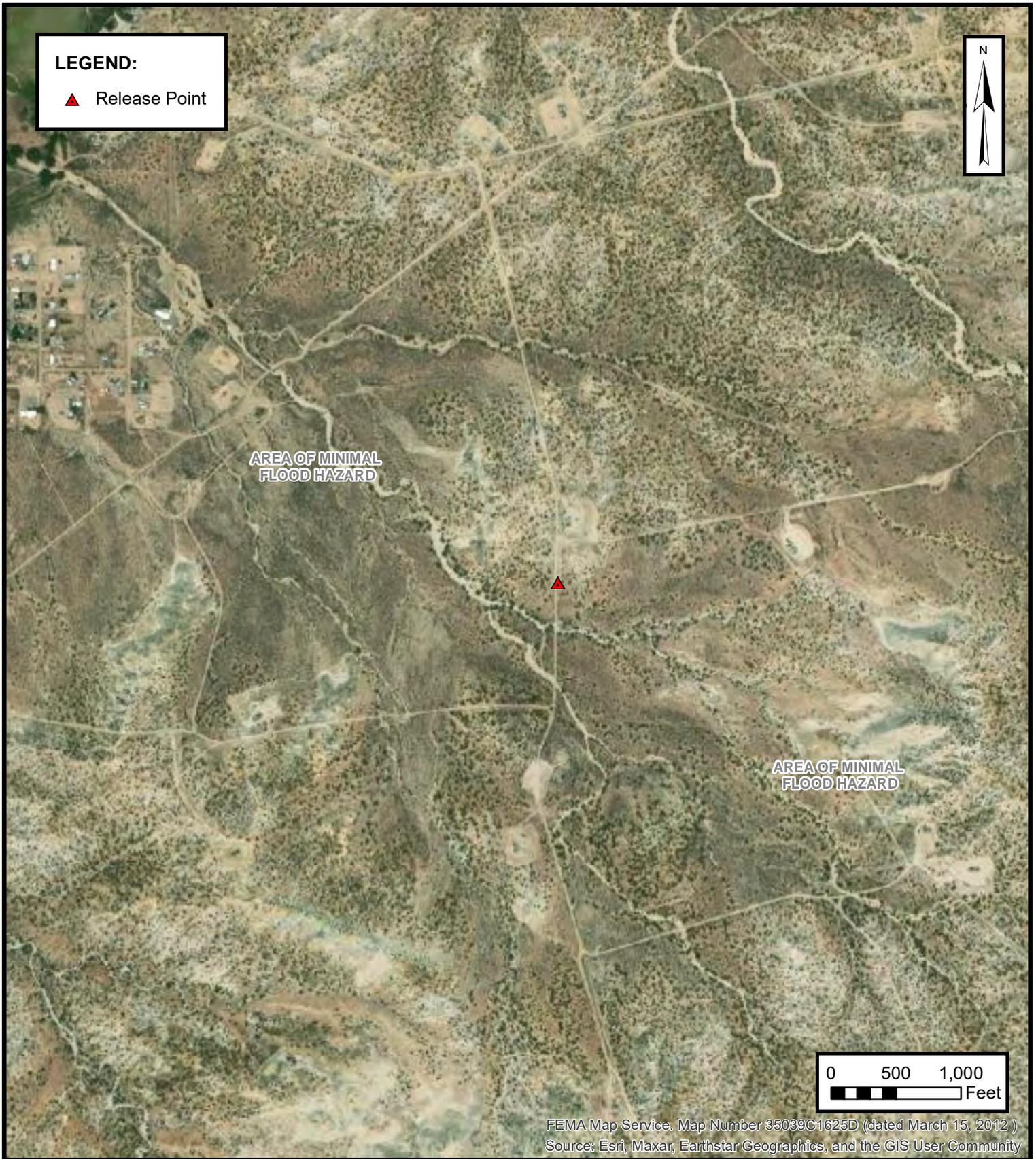
**MINES, MILLS AND QUARRIES**

ENTERPRISE FIELD SERVICES, LLC  
LATERAL 3B-12 (11/16/22)  
Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
36.78389° N, 108.01782° W

PROJECT NUMBER: 05A1226221

**FIGURE**

**G**



**ENSOLUM**  
 Environmental, Engineering and  
 Hydrogeologic Consultants

**100-YEAR FLOOD PLAIN MAP**

ENTERPRISE FIELD SERVICES, LLC  
 LATERAL 3B-12 (11/16/22)  
 Unit Letter F, S29 T30N R11W, San Juan County, New Mexico  
 36.78389° N, 108.01782° W

PROJECT NUMBER: 05A1226221

**FIGURE**  
**H**



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<a href="#">SJ 00284</a>		SJAR	SJ	4	2	19	30N	11W		230089	4076912*	200	35	165
<a href="#">SJ 00284 CLW222415</a>	O		SJ	4	4	19	30N	11W		230066	4076113*	200	35	165
<a href="#">SJ 00638</a>		SJAR	SJ	1	2	19	30N	11W		229708	4077326*	130	70	60
<a href="#">SJ 01073</a>		SJAR	SJ	1	2	19	30N	11W		229708	4077326*	100	38	62
<a href="#">SJ 01123</a>		SJAR	SJ	1	4	19	30N	11W		229687	4076527*	40	15	25
<a href="#">SJ 01621</a>		SJAR	SJ	2	3	19	30N	11W		229299	4076541*	40	38	2
<a href="#">SJ 01636</a>		SJAR	SJ	2	2	19	30N	11W		230103	4077313*	70	25	45
<a href="#">SJ 02193</a>		SJAR	SJ			19	30N	11W		229461	4076761*		105	
<a href="#">SJ 02692</a>		SJAR	SJ	2	2	3	19	30N	11W	229398	4076640*	52	12	40
<a href="#">SJ 02812</a>		SJAR	SJ	2	2	3	19	30N	11W	229398	4076640*	50		
<a href="#">SJ 02862</a>		SJAR	SJ	3	2	2	19	30N	11W	230002	4077212*	20		
<a href="#">SJ 02968</a>		SJAR	SJ	2	2	3	19	30N	11W	229398	4076640*	75	5	70
<a href="#">SJ 03077</a>		SJAR	SJ	1	1	2	30	30N	11W	229565	4075823*	75	70	5
<a href="#">SJ 03088</a>		SJAR	SJ	4	1	2	19	30N	11W	229807	4077225*	120	80	40
<a href="#">SJ 03224</a>		SJAR	SJ	4	2	1	30	30N	11W	229376	4075638*	80	30	50
<a href="#">SJ 03251</a>		SJ	SJ	4	4	3	32	30N	11W	230879	4072752*	150	77	73
<a href="#">SJ 03315</a>		SJAR	SJ	2	1	4	19	30N	11W	229786	4076626*	60	54	6
<a href="#">SJ 03403</a>		SJAR	SJ	2	2	1	19	30N	11W	229419	4077440*	400		
<a href="#">SJ 03434</a>		SJAR	SJ	4	1	2	19	30N	11W	229807	4077225*	140		
<a href="#">SJ 03437</a>		SJAR	SJ	2	1	4	19	30N	11W	229786	4076626*	30		
<a href="#">SJ 03533</a>		SJAR	SJ	3	1	3	19	30N	11W	228772	4076456*	20		
<a href="#">SJ 03615</a>		SJAR	SJ	1	1	2	19	30N	11W	229607	4077425*	105	35	70
<a href="#">SJ 03645</a>		SJAR	SJ	1	1	3	19	30N	11W	228772	4076656*	60	20	40
<a href="#">SJ 03668</a>		SJAR	SJ	2	1	2	30	30N	11W	229765	4075823*	380	280	100
<a href="#">SJ 04201 POD1</a>		SJAR	SJ	4	1	2	30	30N	11W	229772	4075622	380	340	40
<a href="#">SJ 04389 POD1</a>		SJAR	SJ	4	1	1	19	30N	11W	229080	4077213	100		

\*UTM location was derived from PLSS - see Help

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POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
------------	--------------	-------	--------	------	------	-----	-----	-----	-----	---	---	------------	-------------	--------------

Average Depth to Water: **71 feet**  
 Minimum Depth: **5 feet**  
 Maximum Depth: **340 feet**

**Record Count:** 26

**PLSS Search:**

**Section(s):** 29, 19, 20, 21,  
28, 30, 31, 32,  
33      **Township:** 30N      **Range:** 11W

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

DATE: 6/4/96 #100 = 30-045-29327

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO

Operator Meridian Oil Inc. Location: Unit F Sec. 28 Twp 30 Rng 11

Name of Well/Wells. or Pipeline Serviced \_\_\_\_\_  
Morris Com #100

Elevation \_\_\_\_\_ Completion Date 6/4/96 Total Depth 377' Land Type P

Casing Strings; Sizes, Types & Depths 6/3 Set 60' of 8" PVC Casing.  
NO GAS, WATER, or Boulders were encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented  
WITH 15 SACKS.

If Cement or Bentonite Plugs have been placed, show depths & amounts used  
NONE

Depths & thickness of water zones with description of water: Fresh, Clear,  
Salty, Sulphur, Etc. HIT FRESH WATER AT 340.'

Depths gas encountered: NONE

Ground bed depth with type & amount of coke breeze used: 377' Depth.  
Used 85 SACKS of Asbuty 218R (H250#)

Depths anodes placed: 290', 280', 270', 260', 250', 240', 230', 220', 210', 200', 190', 180', 170', 160', + 150'

Depths vent pipes placed: SURFACE TO 377'

Vent pipe perforations: BOTTOM 240.'

Remarks: \_\_\_\_\_

RECEIVED  
FEB 19 1997

OIL CON. DIV.

If any of the above data is unavailable, please indicate. <sup>DISC 3</sup> Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

CPS GROUND BED CONSTRUCTION WORKSHEET

2978-10  
 7L91 TOTAL VOLTS 11.25 ANODES 351 OHMS 320 DATE 6/11/96  
 JEHOL. MOSS

REMARKS: Driller Reported Damp Areas AT 130, 190, AND WATER AT 340. INSTALLED 377 OF 1" PE VENT PIPE WITH THE BOTTOM 240 PERFORATED. COKE BREEZE TO 130

DEPTH	LOG ANODE	ANODE												
100			295	2.4		490			685					
105			300	2.2		495			690					
110			305	1.9		500			695					
115			310	1.6		505			700					
120			315	1.7		510								
125			320	1.8		515								
130	2.0		325	2.1		520								
135	1.4		330	1.7		525			190	2.8			6.9	
140	2.2		335	1.5		530			280	2.9			7.0	
145	2.3		340	2.0		535			210	2.9			7.6	
150	2.8	15	345	2.2		540			260	3.6			7.6	
155	3.8		350	2.2		545			250	3.7			7.9	
160	3.5	14	355	2.0		550			240	3.3			7.5	
165	3.4		360	2.2		555			230	3.2			7.2	
170	3.1	13	365	2.3		560			220	3.5			8.8	
175	3.4		370	2.0		565			210	3.5			8.8	
180	3.0	12	375	T.D.	377	570			200	4.0			9.8	
185	3.0		380			575			190	3.4			9.0	
190	3.3	11	385			580			180	3.8			8.3	
195	3.8		390			585			170	3.3			8.2	
200	3.9	10	395			590			160	3.6			8.7	
205	3.8		400			595			150	3.7			7.8	
210	3.4	9	405			600								
215	3.1		410			605								
220	3.4	8	415			610								
225	3.3		420			615								
230	3.1	7	425			620								
235	3.1		430			625								
240	3.3	6	435			630								
245	3.4		440			635								
250	3.1	5	445			640								
255	3.1		450			645								
260	3.3	4	455			650								
265	3.2		460			655								
270	3.6	3	465			660								
275	3.3		470			665								
280	2.9	2	475			670								
285	2.9		480			675								
290	2.7	1	485			680								

30-045-09331

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO

Operator Meridian Oil Inc. Location: Unit 2 Sec. 21 Twp 30 Rng 11

Name of Well/Wells. or Pipeline Serviced \_\_\_\_\_

Morris A#6

Elevation 5791 Completion Date 10/9/94 Total Depth 448' Land Type P

Casing Strings, Sizes, Types & Depths 10/8 Set 99' of 8" PVC casing.

NO GAS or Boulders, BUT WATER WAS ENCOUNTERED AT 55' DURING CASING.

If Casing Strings are cemented, show amounts & types used Cemented

WITH 20 SACKS.

If Cement or Bentonite Plugs have been placed, show depths & amounts used

NONE

Depths & thickness of water zones with description of water: Fresh, Clear,

Salty, Sulphur, Etc. HIT SOME FRESH WATER AT 140', AND A MAJOR FRESH

WATER VEIN AT 375'. A WATER SAMPLE WAS TAKEN.

Depths gas encountered: NONE

Ground bed depth with type & amount of coke breeze used: 448' Depth.

Used 58 SACKS OF Lotesco SW (5800#)

Depths anodes placed: 425', 416', 405', 395', 385', 375', 365', 355', 220', 195', 185', 170', 160', 150', + 140'.

Depths vent pipes placed: SURFACE TO 448'.

Vent pipe perforations: BOTTOM 320'.

Remarks: \_\_\_\_\_

RECEIVED  
R  
JAN 20 1995

OIL CORP. DIV.  
DIST. 9

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

30-045-26625

3943

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO  
(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL INC. Location: Unit E Sec. 21 Twp 30 Rng 11

Name of Well/Wells or Pipeline Serviced FIFIELD #4

cps 190'

Elevation 5754' Completion Date 11/5/87 Total Depth 380' Land Type\* N/A

Casing, Sizes, Types & Depths N/A

If Casing is cemented, show amounts & types used N/A

If Cement or Bentonite Plugs have been placed, show depths & amounts used  
N/A

Depths & thickness of water zones with description of water when possible:  
Fresh, Clear, Salty, Sulphur, Etc. 100' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 350', 340', 330', 320', 310', 300', 290', 280', 270', 260'

Depths vent pipes placed: 380'

Vent pipe perforations: 280'

Remarks: gb #1

**RECEIVED**  
MAY 31 1991  
OIL CON. DIV  
DIST. 3

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included

\*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

MERIDIAN OIL INC.  
WELL CASING

OK Burr

27 0238 (Rev. 10-82)

CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

Drilling Log (Attach Hereto)

Completion Date 11-5-87

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check
1902W	<del>FIFIELD</del> # 4 FIFIELD		.79 IV	<input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad
Location	Anode Size	Anode Type	Size Bar:	
E21-30-11	2" x 60"	Duration	6 3/4"	
Feet Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used
380	375			
Anode Depth				
# 1 350'	# 2 340'	# 3 330'	# 4 320'	# 5 310'
# 6 300'	# 7 290'	# 8 280'	# 9 270'	# 10 260'
Anode Output (Amps)				
# 1 5.3	# 2 5.2	# 3 5.4	# 4 5.9	# 5 5.0
# 6 5.8	# 7 5.9	# 8 6.2	# 9 7.2	# 10 6.9
Anode Depth				
# 11	# 12	# 13	# 14	# 15
# 16	# 17	# 18	# 19	# 20
Anode Output (Amps)				
# 11	# 12	# 13	# 14	# 15
# 16	# 17	# 18	# 19	# 20
Total Circuit Resistance	No. 8 C.P. Cable Used		No. 2 C.P. Cable Used	
Volts 11.6	Amps 20.3	Ohms .57		

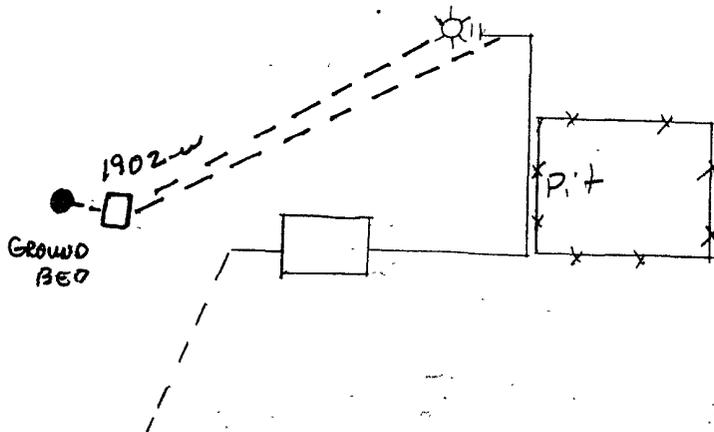
Remarks: DRILLED 380' ; LOGGED 375' DRILLER SAID WATER AT 100' NOT ENOUGH FOR SAMPLE. INSTALLED 380' OF 1" PVC VENT PIPE ; PERFORATED BOTTOM 280'

Rectifier Size: 40 V 16 A  
 Addn'l Depth \_\_\_\_\_  
 Depth Credit: 125 ✓  
 Extra Cable: 30 ✓  
 Ditch & 1 Cable: 10 ✓  
 Ditch & 2 Cable: 180 -?  
 25' Meter Pole: \_\_\_\_\_  
 20' Meter Pole: 1  
 10' Stub Pole: \_\_\_\_\_  
 Junction Box: 1

All Construction Completed

*Randy Smith*  
(Signature)

4300.00 ✓  
 -437.50 ✓  
 -----  
 7.50 ✓ 3862.50  
 4.30 ✓  
 176.40 ✓ 99.00  
 300.00  
 40.00  
 -----  
 4390.70 431330  
 219.54 21567  
 -----  
 4610.24 4528.97 OK



5254

# BURGL CORROSION SYSTEMS, INC.

P.O. BOX 1359 - PHONE 334-6141

AZTEC, NEW MEXICO 87410

DEEP WELL GROUND BED LOG

Date 11-4-87

Company Fifeild #4 Meridian Oil

Well No. 4 Location Fifeild Volts Applied 11.6 Amperes 20.3

Depth (ft)	Reading 1	Reading 2	Reading 3	Depth (ft)	Reading 1	Reading 2	Reading 3	Depth (ft)	Reading 1	Reading 2	Reading 3
5				230	1.6	1.3		455			
10				235	1.9	.9		460			
15				240	1.7	1.2		465			
20				245	2.1	1.8		470			
25				250	2.2	1.9		475			
30				255	1.9			480			
35				260	2.0			485			
40				265	2.2			490			
45				270	2.5			495			
50				275	2.5			500			
55				280	2.6			505			
60				285	2.7			510			
65				290	2.5			515			
70				295	2.4			520			
75				300	2.7			525			
80				305	2.7			530			
85				310	2.6			535			
90				315	2.7			540			
95				320	3.1			545			
100	2.4	2.8		325	3.2			550			
105	2.8	2.2		330	2.9			555			
110	2.8	2.1		335	2.7			560			
115	2.4	1.9		340	2.6			565			
120	2.5	1.9		345	2.7			570			
125	2.6	1.7		350	2.7			575			
130	2.6	1.9		355	2.7			580			
135	2.6	1.8		360	2.1			585			
140	2.5	1.9		365	1.3			590			
145	2.4	1.8		370	1.3	7037.5		595			
150	2.4	1.8		375				600			
155	2.3	1.8		380				605			
160	1.8	1.5		385				610			
165	2.2	1.6		390				615			
170	2.3	1.8		395				620			
175	2.3	1.8		400				625			
180	2.1	1.6		405				630			
185	2.0	1.5		410				635			
190	1.5	1.1		415				640			
195	2.0	1.5		420				645			
200	1.5	1.3		425				650			
205	1.9	1.3		430				655			
210	2.6	1.9		435				660			
215	1.9	1.4		440				665			
220	2.1	1.7		445				670			
225	1.8	1.6		450				675			



DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO

Operator Burlington Resources Location: Unit <sup>I</sup> ~~2~~ Sec. <sup>20</sup> ~~27~~ Twp 30 Rng 11

Name of Well/Wells or Pipeline Serviced Morris Com #101  
30-045-29437

Elevation 5807 Completion Date 2-24-98 Total Depth 300' Land Type SF

Casing Strings, Sizes, Types & Depths 8" PVC X 20'

If Casing Strings are cemented, show amounts & types used 4 Bags Portland cement

If Cement or Bentonite Plugs have been placed, show depths & amounts used None

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 100' seep

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 300' - 1500 lbs  
Loreco SW

Depths anodes placed: 285', 275', 265', 255', 245', 235', 225', 215'

Depths vent pipes placed: 300'

Vent pipe perforations: Bottom 150'

Remarks: \_\_\_\_\_

RECEIVED  
MAR - 9 1999  
OIL CON. DIV.  
DIST. 3

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Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

TIERRA DYNAMIC COMPANY						DEEP WELL GROUNDED LOG DATA SHEET						
COMPANY NAME: <i>Burlington Resources</i>												
WELL NAME: <i>Morris Com #101</i>												
LEGAL LOCATION: <i>5-27-30-11</i>						COUNTY: <i>San Juan</i>						
DATE: <i>2-24-98</i>						TYPE OF COKE: <i>Loresio SW</i>						
DEPTH: <i>300'</i>						AMT. OF COKE BACKFILL: <i>1500 lbs</i>						
BIT SIZE: <i>6 3/4"</i>						VENT PIPE: <i>300'</i>						
DRILLER NAME: <i>Jack Ledbetter</i>						PERF. PIPE: <i>Bottom 150'</i>						
SIZE AND TYPE OF CASING: <i>8" P/C Casing X 20'</i>						ANODE AMT. & TYPE: <i>Anotez - Duriron</i>						
						BOULDER DRILLING: <i>0</i>						
DEPTH			DEPTH			DEPTH			COMPLETION INFORMATION:			
FT.	LOG	ANODE	FT.	LOG	ANODE	FT.	LOG	ANODE	WATER DEPTHS: <i>100'</i>			
									ISOLATION PLUGS:			
100			265	<i>2.7</i>	<i>3</i>	430						
105			270	<i>2.5</i>		435					OUTPUT	OUTPUT
110			275	<i>2.8</i>	<i>2</i>	440			ANODE#	DEPTH	NO COK	COKED
115			280	<i>2.9</i>		445			<i>1</i>	<i>285</i>	<i>3.4</i>	<i>6.8</i>
120			285	<i>3.4</i>	<i>1</i>	450			<i>2</i>	<i>275</i>	<i>2.8</i>	<i>7.2</i>
125			290	<i>4.4</i>		455			<i>3</i>	<i>265</i>	<i>2.7</i>	<i>7.1</i>
130			295	<i>4.0</i>		460			<i>4</i>	<i>255</i>	<i>3.0</i>	<i>7.6</i>
135			300	<i>T.O.</i>		465			<i>5</i>	<i>245</i>	<i>2.8</i>	<i>7.2</i>
140			305			470			<i>6</i>	<i>235</i>	<i>2.6</i>	<i>6.9</i>
145			310			475			<i>7</i>	<i>225</i>	<i>2.6</i>	<i>6.9</i>
150	<i>2.5</i>		315			480			<i>8</i>	<i>215</i>	<i>2.8</i>	<i>7.2</i>
155	<i>1.9</i>		320			485			<i>9</i>			
160	<i>2.1</i>		325			490			<i>10</i>			
165	<i>2.5</i>		330			495			<i>11</i>			
170	<i>2.4</i>		335			500			<i>12</i>			
175	<i>2.5</i>		340			505			<i>13</i>			
180	<i>2.1</i>		345			510			<i>14</i>			
185	<i>2.2</i>		350			515			<i>15</i>			
190	<i>2.1</i>		355			520			<i>16</i>			
195	<i>1.9</i>		360			525			<i>17</i>			
200	<i>2.0</i>		365			530			<i>18</i>			
205	<i>1.6</i>		370			535			<i>19</i>			
210	<i>1.5</i>		375			540			<i>20</i>			
215	<i>2.4</i>	<i>8</i>	380			545			<i>21</i>			
220	<i>2.1</i>		385			550			<i>22</i>			
225	<i>2.2</i>	<i>7</i>	390			555			<i>23</i>			
230	<i>2.4</i>		395			560			<i>24</i>			
235	<i>2.4</i>	<i>6</i>	400			565			<i>25</i>			
240	<i>2.3</i>		405			570			<i>26</i>			
245	<i>2.3</i>	<i>5</i>	410			575			<i>27</i>			
250	<i>2.3</i>		415			580			<i>28</i>			
255	<i>2.4</i>	<i>4</i>	420			585			<i>29</i>			
260	<i>2.6</i>		425			590			<i>30</i>			
						595						
LOGGING VOLTS: <i>11.80</i>						VOLTAGE SOURCE: <i>Auto</i>						
TOTAL AMPS: <i>21.9</i>						TOTAL G/B RESISTANCE: <i>.53</i>						
REMARKS:												

8 ✓

30-045-08930

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO  
(Submit 3 copies to OCD Aztec Office)

Operator Texaco E&P Inc. Location: Unit N Sec. 32 Twp 30N Rng 11W

Name of Well/Wells or Pipeline Serviced Fed State Com "A" #1

Elevation \_\_\_\_\_ Completion Date 12/15/78 Total Depth 300' Land Type\* \_\_\_\_\_

Casing, Sizes, Types & Depths 6 3/4" hole to 300'

If Casing is cemented, show amounts & types used Unknown

If Cement or Bentonite Plugs have been placed, show depths & amounts used  
Unknown

Depths & thickness of water zones with description of water when possible:  
Fresh, Clear, Salty, Sulphur, Etc. See attached log

Depths gas encountered: \_\_\_\_\_

Type & amount of coke breeze used: \_\_\_\_\_

Depths anodes placed: See attached log

Depths vent pipes placed: \_\_\_\_\_

Vent pipe perforations: \_\_\_\_\_

Remarks: \_\_\_\_\_

**RECEIVED**  
MAR 2 1992  
OIL CON. DIV.  
DIST. 3

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

DATA SHEET NO. 1041

COMPANY Texaco INC JOB No. 9832 DATE: 12-15-78  
 WELL: FEDERAL STATE COM. A-1 PIPELINE: \_\_\_\_\_  
 LOCATION: SEC. 32 TWP. 30N RGE. 11W CO. SAN JUAN STATE New Mexico  
 ELEV. \_\_\_\_\_ FT: ROTARY \_\_\_\_\_ FT: CABLE TOOL \_\_\_\_\_ FT: CASING \_\_\_\_\_ FT.  
 GROUNDBED: DEPTH 300' FT. DIA. 1 3/4 IN. GAB 4200 LBS. ANODES B-D-51 CD

DEPTH, FT.	DRILLER'S LOG	DRILL PIPE TO STRUCTURE			EXPLORING ANODE TO STRUCTURE			DEPTH, TOP OF ANODES
		E	I	R	E	I	AOR	
150'	150' Water						4.0	
5							5.1	
160							3.5	
5							3.1	
170							3.0	
5							2.8	
180							2.5	
5							2.5	
190							2.7	
5							2.7	
200			FINAL	2			2.5	
5							2.6	
210				1.1		X	2.5	8-210
5							2.4	
220				1.0		X	2.3	7-220
5							2.5	
230				1.1		X	2.4	6-230
5							2.4	
240				1.1		X	2.4	5-240
5				1.1			2.5	
250							2.4	
5				1.2		X	2.5	4-255
260							2.5	
5				1.0		X	2.2	3-265
270							2.0	
5				1.0		X	2.1	2-275
280							2.1	
5				1.0		X	2.0	1-285
290							2.0	
5								
300	TD 300							

GROUNDBED RESISTANCE: (1) VOLTS \_\_\_\_\_ + AMPS \_\_\_\_\_ = \_\_\_\_\_ OHMS

(2) VIBROGROUND 0.42 OHMS



## APPENDIX C

# Executed C-138 Solid Waste Acceptance Form

---

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-138  
Revised 08/01/11

\*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

97057-1125

**REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE**

1. **Generator Name and Address:**  
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401  
PayKey: RB21200  
PM: Gary Turner  
AFE: N61382

2. **Originating Site:**  
Lateral 3B-12

3. **Location of Material (Street Address, City, State or ULSTR):**  
UL F Section 29 T30N R11W; 36.78389, -108.017820  
Nov 2022

4. **Source and Description of Waste:**  
Source: Remediation activities associated with a natural gas pipeline leak.  
Description: Hydrocarbon/Condensate impacted soil associated natural gas pipeline release.  
Estimated Volume 50 yd<sup>3</sup>/ bbls Known Volume (to be entered by the operator at the end of the haul) 124/55 yd<sup>3</sup>/ bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long *Thomas Long*, representative or authorized agent for Enterprise Products Operating do hereby  
**Generator Signature**  
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 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. Operator Use Only: Waste Acceptance Frequency  Monthly  Weekly  Per Load

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 in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

MSDS Information  RCRA Hazardous Waste Analysis  Process Knowledge  Other (Provide description in Box 4)

**GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS**

I, Thomas Long *Thomas Long* 11-15-2022, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete  
**Generator Signature**  
the required testing/sign the Generator Waste Testing Certification.

I, Greg Crabtree, representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter: OFT and Riley Industrial**

**OCD Permitted Surface Waste Management Facility**

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility \* Permit #: NM 01-0011**

Address of Facility: **Hilltop, NM**

Method of Treatment and/or Disposal:

Evaporation  Injection  Treating Plant  Landfarm  Landfill  Other

**Waste Acceptance Status:**

**APPROVED**

**DENIED** (Must Be Maintained As Permanent Record)

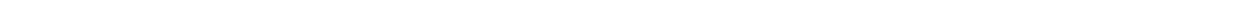
PRINT NAME: Greg Crabtree  
SIGNATURE: *Greg Crabtree*  
Surface Waste Management Facility Authorized Agent

TITLE: Enviro Manager DATE: 11/15/22  
TELEPHONE NO.: 505-632-0615



## APPENDIX D

# Photographic Documentation



SITE PHOTOGRAPHS

Closure Report  
Enterprise Field Services, LLC  
Lateral 3B-12 (11/16/22)  
Ensolum Project No. 05A1226221



<p><b>Photograph 1</b></p> <p>Photograph Description: View of the in-process excavation activities.</p>	 A close-up photograph of an excavation site. A large, dark pipe is being lowered into a deep, earthen trench. The soil is light brown and appears to be in the process of being excavated. A person in a blue shirt and yellow safety vest is partially visible in the upper left corner.
<p><b>Photograph 2</b></p> <p>Photograph Description: View of the final excavation.</p>	 A photograph showing a deep, rectangular excavation pit. A blue excavator is positioned at the top edge of the pit. The background shows a clear blue sky and some distant hills.
<p><b>Photograph 3</b></p> <p>Photograph Description: View of the final flow path excavation.</p>	 A photograph of a long, narrow excavation trench running alongside a dirt road. The trench is filled with earth and rocks. The background shows a clear blue sky and some trees.

SITE PHOTOGRAPHS

Closure Report  
Enterprise Field Services, LLC  
Lateral 3B-12 (11/16/22)  
Ensolum Project No. 05A1226221



**Photograph 4**

Photograph Description: View of the site after initial restoration.



**Photograph 5**

Photograph Description: View of the site after initial restoration.





## APPENDIX E

# Regulatory Correspondence



**From:** [Kyle Summers](#)  
**To:** [Ranee Deechilly](#)  
**Cc:** [Chad D'Aponti](#)  
**Subject:** FW: [EXTERNAL] Lateral 3B-12 - UL F Section 29 T30N R11W; 36.78389, -108.017820; Incident # nAPP2232045496  
**Date:** Wednesday, November 16, 2022 1:50:45 PM  
**Attachments:** [image004.png](#)  
[image005.png](#)  
[image006.png](#)

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**Kyle Summers**

Principal  
903-821-5603  
**Ensolum, LLC**  
in f

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**From:** Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>  
**Sent:** Wednesday, November 16, 2022 1:49 PM  
**To:** Long, Thomas <tjlong@eprod.com>; Ryan Joyner <rjoyner@blm.gov>  
**Cc:** Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>  
**Subject:** RE: [EXTERNAL] Lateral 3B-12 - UL F Section 29 T30N R11W; 36.78389, -108.017820; Incident # nAPP2232045496

[ **\*\*EXTERNAL EMAIL\*\*** ]

Tom,

Thank you for the notice. Your variance request specifically addressing 19.15.29.12D (1a) NMAC is approved.

If an OCD representative is not on-site on the date &/or time given, please sample per 19.15.29 NMAC. For whatever reason, if the sampling timeframe is altered, please notify the OCD as soon as possible so we may adjust our schedule(s). Failure to notify the OCD of this change may result in the closure sample(s) not being accepted.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

Regards

**Nelson Velez** • Environmental Specialist - Adv  
Environmental Bureau | EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87410  
(505) 469-6146 | [nelson.velez@emnrd.nm.gov](mailto:nelson.velez@emnrd.nm.gov) *NOTE NEW EMAIL ADDRESS*  
<http://www.emnrd.state.nm.us/OCD/>



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**From:** Long, Thomas <[tjlong@eprod.com](mailto:tjlong@eprod.com)>  
**Sent:** Wednesday, November 16, 2022 1:47 PM  
**To:** Velez, Nelson, EMNRD <[Nelson.Velez@emnrn.nm.gov](mailto:Nelson.Velez@emnrn.nm.gov)>; Ryan Joyner <[rjoyner@blm.gov](mailto:rjoyner@blm.gov)>  
**Cc:** Stone, Brian <[bmstone@eprod.com](mailto:bmstone@eprod.com)>; Kyle Summers <[ksummers@ensolum.com](mailto:ksummers@ensolum.com)>  
**Subject:** [EXTERNAL] Lateral 3B-12 - UL F Section 29 T30N R11W; 36.78389, -108.017820; Incident # nAPP2232045496

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

Nelson/Ryan,

This email is a sample notification and variance request. Enterprise is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Enterprise would like to collect closure samples tomorrow November 17, 2022 at 9:00 a.m. at the Lateral 3B-12 excavation. Please acknowledge acceptance of this variance request. If you have any questions, please call or email.

**Thomas J. Long**  
**Senior Environmental Scientist**  
**Enterprise Products Company**  
**614 Reilly Ave.**  
**Farmington, New Mexico 87401**  
**505-599-2286 (office)**  
**505-215-4727 (Cell)**  
[tjlong@eprod.com](mailto:tjlong@eprod.com)



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This message (including any attachments) is confidential and intended for a specific individual and purpose. If you are not the intended recipient, please notify the sender immediately and delete this message.



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## APPENDIX F

### Table 1 – Soil Analytical Summary

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**TABLE 1**  
Lateral 3B-12 (11/16/22)  
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX <sup>1</sup>	TPH GRO	TPH DRO	TPH MRO	Total Combined TPH (GRO/DRO/MRO)	Chloride
		C- Composite G - Grab	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria (Tier I)				10	NE	NE	NE	50	NE	NE	NE	100	600
<b>Flow Path Composite Soil Sample</b>													
FP-1	11.17.22	C	0 to 1	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<14	<48	ND	<60
FP-2	11.17.22	C	0 to 1	<0.016	<0.032	<0.032	<0.065	ND	<3.2	<14	<48	ND	<59
FP-3	11.17.22	C	0 to 1	<0.029	<0.058	<0.058	<0.12	ND	<5.8	<15	<49	ND	<60
FP-4	11.17.22	C	0 to 1	<0.020	<0.039	<0.039	<0.079	ND	<3.9	<14	<47	ND	<60
<b>Excavation Composite Soil Samples</b>													
S-1	11.17.22	C	8	<0.018	<0.036	<0.036	<0.073	ND	<3.6	<14	<48	ND	<60
S-2	11.17.22	C	0 to 8	<0.020	<0.040	<0.040	<0.079	ND	<4.0	<13	<44	ND	<60
S-3	11.17.22	C	0 to 8	<0.017	<0.033	<0.033	<0.066	ND	<3.3	<14	<47	ND	<59
S-4	11.17.22	C	0 to 8	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<14	<45	ND	<60
S-5	11.17.22	C	0 to 8	<0.018	<0.035	<0.035	<0.071	ND	<3.5	<15	<50	ND	<60

Note: Concentrations in bold and yellow exceed the applicable NM EMNRD Closure Criteria

<sup>1</sup> = Total combined concentrations are rounded to two (2) significant figures to match the laboratory resolution of the individual constituents.

ND = Not Detected above the Practical Quantitation Limits (PQLs) or Reporting Limits (RLs)

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics



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## APPENDIX G

# Laboratory Data Sheets & Chain of Custody Documentation

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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 28, 2022

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Lateral 3B 12

OrderNo.: 2211B10

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/18/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** S-1

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:00:00 AM

**Lab ID:** 2211B10-001

**Matrix:** MEOH (SOIL) **Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 10:01:27 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 10:22:21 AM	71589
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/18/2022 10:22:21 AM	71589
Surr: DNOP	103	21-129		%Rec	1	11/18/2022 10:22:21 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	11/18/2022 10:04:49 AM	B92694
Surr: BFB	86.8	37.7-212		%Rec	1	11/18/2022 10:04:49 AM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	11/18/2022 10:04:49 AM	D92694
Toluene	ND	0.036		mg/Kg	1	11/18/2022 10:04:49 AM	D92694
Ethylbenzene	ND	0.036		mg/Kg	1	11/18/2022 10:04:49 AM	D92694
Xylenes, Total	ND	0.073		mg/Kg	1	11/18/2022 10:04:49 AM	D92694
Surr: 4-Bromofluorobenzene	89.9	70-130		%Rec	1	11/18/2022 10:04:49 AM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** S-2

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:05:00 AM

**Lab ID:** 2211B10-002

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 10:13:52 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	11/18/2022 10:32:47 AM	71589
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	11/18/2022 10:32:47 AM	71589
Surr: DNOP	106	21-129		%Rec	1	11/18/2022 10:32:47 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	11/18/2022 10:28:40 AM	B92694
Surr: BFB	87.3	37.7-212		%Rec	1	11/18/2022 10:28:40 AM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	11/18/2022 10:28:40 AM	D92694
Toluene	ND	0.040		mg/Kg	1	11/18/2022 10:28:40 AM	D92694
Ethylbenzene	ND	0.040		mg/Kg	1	11/18/2022 10:28:40 AM	D92694
Xylenes, Total	ND	0.079		mg/Kg	1	11/18/2022 10:28:40 AM	D92694
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	11/18/2022 10:28:40 AM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** S-3

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:10:00 AM

**Lab ID:** 2211B10-003

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	59		mg/Kg	20	11/18/2022 10:26:16 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 10:43:14 AM	71589
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/18/2022 10:43:14 AM	71589
Surr: DNOP	102	21-129		%Rec	1	11/18/2022 10:43:14 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	11/18/2022 10:52:21 AM	B92694
Surr: BFB	88.5	37.7-212		%Rec	1	11/18/2022 10:52:21 AM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	11/18/2022 10:52:21 AM	D92694
Toluene	ND	0.033		mg/Kg	1	11/18/2022 10:52:21 AM	D92694
Ethylbenzene	ND	0.033		mg/Kg	1	11/18/2022 10:52:21 AM	D92694
Xylenes, Total	ND	0.066		mg/Kg	1	11/18/2022 10:52:21 AM	D92694
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	11/18/2022 10:52:21 AM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** S-4

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:15:00 AM

**Lab ID:** 2211B10-004

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 10:38:41 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 10:53:42 AM	71589
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	11/18/2022 10:53:42 AM	71589
Surr: DNOP	107	21-129		%Rec	1	11/18/2022 10:53:42 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	11/18/2022 11:16:35 AM	B92694
Surr: BFB	85.9	37.7-212		%Rec	1	11/18/2022 11:16:35 AM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	11/18/2022 11:16:35 AM	D92694
Toluene	ND	0.038		mg/Kg	1	11/18/2022 11:16:35 AM	D92694
Ethylbenzene	ND	0.038		mg/Kg	1	11/18/2022 11:16:35 AM	D92694
Xylenes, Total	ND	0.076		mg/Kg	1	11/18/2022 11:16:35 AM	D92694
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	11/18/2022 11:16:35 AM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** S-5

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:20:00 AM

**Lab ID:** 2211B10-005

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 10:51:05 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/18/2022 11:04:11 AM	71589
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/18/2022 11:04:11 AM	71589
Surr: DNOP	105	21-129		%Rec	1	11/18/2022 11:04:11 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	11/18/2022 11:40:24 AM	B92694
Surr: BFB	90.0	37.7-212		%Rec	1	11/18/2022 11:40:24 AM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	11/18/2022 11:40:24 AM	D92694
Toluene	ND	0.035		mg/Kg	1	11/18/2022 11:40:24 AM	D92694
Ethylbenzene	ND	0.035		mg/Kg	1	11/18/2022 11:40:24 AM	D92694
Xylenes, Total	ND	0.071		mg/Kg	1	11/18/2022 11:40:24 AM	D92694
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	11/18/2022 11:40:24 AM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** FP-1

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:25:00 AM

**Lab ID:** 2211B10-006

**Matrix:** MEOH (SOIL) **Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 11:03:29 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 11:14:41 AM	71589
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/18/2022 11:14:41 AM	71589
Surr: DNOP	105	21-129		%Rec	1	11/18/2022 11:14:41 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	11/18/2022 12:04:08 PM	B92694
Surr: BFB	90.9	37.7-212		%Rec	1	11/18/2022 12:04:08 PM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	11/18/2022 12:04:08 PM	D92694
Toluene	ND	0.040		mg/Kg	1	11/18/2022 12:04:08 PM	D92694
Ethylbenzene	ND	0.040		mg/Kg	1	11/18/2022 12:04:08 PM	D92694
Xylenes, Total	ND	0.080		mg/Kg	1	11/18/2022 12:04:08 PM	D92694
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	11/18/2022 12:04:08 PM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** FP-2

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:30:00 AM

**Lab ID:** 2211B10-007

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	59		mg/Kg	20	11/18/2022 11:15:54 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 11:26:39 AM	71589
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/18/2022 11:26:39 AM	71589
Surr: DNOP	106	21-129		%Rec	1	11/18/2022 11:26:39 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	11/18/2022 12:27:50 PM	B92694
Surr: BFB	88.8	37.7-212		%Rec	1	11/18/2022 12:27:50 PM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	11/18/2022 12:27:50 PM	D92694
Toluene	ND	0.032		mg/Kg	1	11/18/2022 12:27:50 PM	D92694
Ethylbenzene	ND	0.032		mg/Kg	1	11/18/2022 12:27:50 PM	D92694
Xylenes, Total	ND	0.065		mg/Kg	1	11/18/2022 12:27:50 PM	D92694
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	11/18/2022 12:27:50 PM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** FP-3

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:35:00 AM

**Lab ID:** 2211B10-008

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 11:28:19 AM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/18/2022 11:37:12 AM	71589
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/18/2022 11:37:12 AM	71589
Surr: DNOP	106	21-129		%Rec	1	11/18/2022 11:37:12 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.8		mg/Kg	1	11/18/2022 12:51:35 PM	B92694
Surr: BFB	88.1	37.7-212		%Rec	1	11/18/2022 12:51:35 PM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.029		mg/Kg	1	11/18/2022 12:51:35 PM	D92694
Toluene	ND	0.058		mg/Kg	1	11/18/2022 12:51:35 PM	D92694
Ethylbenzene	ND	0.058		mg/Kg	1	11/18/2022 12:51:35 PM	D92694
Xylenes, Total	ND	0.12		mg/Kg	1	11/18/2022 12:51:35 PM	D92694
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	11/18/2022 12:51:35 PM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2211B10**

Date Reported: **11/28/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** ENSOLUM

**Client Sample ID:** FP-4

**Project:** Lateral 3B 12

**Collection Date:** 11/17/2022 9:40:00 AM

**Lab ID:** 2211B10-009

**Matrix:** MEOH (SOIL)

**Received Date:** 11/18/2022 6:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	60		mg/Kg	20	11/18/2022 12:05:32 PM	71590
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 11:47:43 AM	71589
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/18/2022 11:47:43 AM	71589
Surr: DNOP	103	21-129		%Rec	1	11/18/2022 11:47:43 AM	71589
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	11/18/2022 1:15:19 PM	B92694
Surr: BFB	87.6	37.7-212		%Rec	1	11/18/2022 1:15:19 PM	B92694
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	11/18/2022 1:15:19 PM	D92694
Toluene	ND	0.039		mg/Kg	1	11/18/2022 1:15:19 PM	D92694
Ethylbenzene	ND	0.039		mg/Kg	1	11/18/2022 1:15:19 PM	D92694
Xylenes, Total	ND	0.079		mg/Kg	1	11/18/2022 1:15:19 PM	D92694
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	11/18/2022 1:15:19 PM	D92694

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2211B10

28-Nov-22

**Client:** ENSOLUM  
**Project:** Lateral 3B 12

Sample ID: <b>MB-71590</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71590</b>	RunNo: <b>92690</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3336788</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-71590</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71590</b>	RunNo: <b>92690</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3336789</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2211B10

28-Nov-22

**Client:** ENSOLUM  
**Project:** Lateral 3B 12

Sample ID: <b>2211B10-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-1</b>	Batch ID: <b>71589</b>	RunNo: <b>92689</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335117</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	14	46.82	0	107	36.1	154			
Surr: DNOP	5.6		4.682		119	21	129			

Sample ID: <b>LCS-71589</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71589</b>	RunNo: <b>92689</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335128</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	15	50.00	0	93.8	64.4	127			
Surr: DNOP	5.3		5.000		106	21	129			

Sample ID: <b>MB-71589</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71589</b>	RunNo: <b>92689</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335129</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		94.7	21	129			

Sample ID: <b>2211B10-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-1</b>	Batch ID: <b>71589</b>	RunNo: <b>92689</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3337330</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	15	48.88	0	111	36.1	154	7.68	33.9	
Surr: DNOP	5.7		4.888		117	21	129	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2211B10

28-Nov-22

**Client:** ENSOLUM  
**Project:** Lateral 3B 12

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>B92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335416</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.1	37.7	212			

Sample ID: <b>2.5ug gro lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>B92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335417</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.8	72.3	137			
Surr: BFB	1800		1000		180	37.7	212			

Sample ID: <b>2211b10-001ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>S-1</b>	Batch ID: <b>B92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335429</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	18.22	0	96.8	70	130			
Surr: BFB	1400		728.9		190	37.7	212			

Sample ID: <b>2211b10-001amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>S-1</b>	Batch ID: <b>B92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335430</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.6	18.22	0	95.0	70	130	1.92	20	
Surr: BFB	1400		728.9		189	37.7	212	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2211B10

28-Nov-22

**Client:** ENSOLUM  
**Project:** Lateral 3B 12

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>D92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335494</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>D92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335495</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.8	80	120			
Toluene	0.97	0.050	1.000	0	97.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.7	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	70	130			

Sample ID: <b>2211b10-002ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>S-2</b>	Batch ID: <b>D92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335507</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.7924	0	93.9	68.8	120			
Toluene	0.76	0.040	0.7924	0	95.6	73.6	124			
Ethylbenzene	0.76	0.040	0.7924	0	96.3	72.7	129			
Xylenes, Total	2.3	0.079	2.377	0	96.6	75.7	126			
Surr: 4-Bromofluorobenzene	0.74		0.7924		93.1	70	130			

Sample ID: <b>2211b10-002amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>S-2</b>	Batch ID: <b>D92694</b>	RunNo: <b>92694</b>								
Prep Date:	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3335508</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.7924	0	92.9	68.8	120	1.01	20	
Toluene	0.75	0.040	0.7924	0	94.3	73.6	124	1.37	20	
Ethylbenzene	0.75	0.040	0.7924	0	95.1	72.7	129	1.25	20	
Xylenes, Total	2.3	0.079	2.377	0	95.3	75.7	126	1.31	20	
Surr: 4-Bromofluorobenzene	0.73		0.7924		92.7	70	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: ENSOLUM

Work Order Number: 2211B10

RcptNo: 1

Received By: Tracy Casarrubias 11/18/2022 6:20:00 AM

Completed By: Tracy Casarrubias 11/18/2022 6:25:18 AM

Reviewed By: *TMC* 11/18/22

### Chain of Custody

- 1. Is Chain of Custody complete? Yes  No  Not Present
- 2. How was the sample delivered? Courier

### Log In

- 3. Was an attempt made to cool the samples? Yes  No  NA
- 4. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 5. Sample(s) in proper container(s)? Yes  No
- 6. Sufficient sample volume for indicated test(s)? Yes  No
- 7. Are samples (except VOA and ONG) properly preserved? Yes  No
- 8. Was preservative added to bottles? Yes  No  NA
- 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes  No  NA
- 10. Were any sample containers received broken? Yes  No
- 11. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 12. Are matrices correctly identified on Chain of Custody? Yes  No
- 13. Is it clear what analyses were requested? Yes  No
- 14. Were all holding times able to be met? Yes  No   
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: *TMC 11/18/22*

### Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			
2	0.2	Good	Yes			

### Chain-of-Custody Record

Client: Ensolum, LLC  
 Mailing Address: 606 S Biogarden Suite A  
Alberq, NM 87410  
 Phone #: \_\_\_\_\_

email or Fax#: ksummers@ensolum.com  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation:  Az Compliance  
 NELAC  Other  
 EDD (Type) \_\_\_\_\_

Sampler:  
 On Ice:  Yes  No  
 # of Coolers: 2

Cooler Temp (including CF): 1.4 -0.2 ~ 1.2 (°C)  
 Container Type and #  
 Preservative Type  
 HEAL No.

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
11/17/22	9:00	S	S-1	(1) 4oz Jar	COOL	001
11/17/22	9:05	S	S-2	(1) 4oz Jar	COOL	002
11/17/22	9:10	S	S-3	(1) 4oz Jar	COOL	003
11/17/22	9:15	S	S-4	(1) 4oz Jar	COOL	004
11/17/22	9:20	S	S-5	(1) 4oz Jar	COOL	005
11/17/22	9:25	S	FP-1	(1) 4oz Jar	COOL	006
11/17/22	9:30	S	FP-2	(1) 4oz Jar	COOL	007
11/17/22	9:35	S	FP-3	(1) 4oz Jar	COOL	008
11/17/22	9:40	S	FP-4	(1) 4oz Jar	COOL	009

Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: [Signature]  
 Date: 11/17/22 Time: 11:26  
 Relinquished by: [Signature]  
 Date: 11/17/22 Time: 18:04

Turn-Around Time: SAME DAY  
 Standard  Rush 100%  
 Project Name:  
Lateral 3B-12  
 Project #:  
See notes

Project Manager: Ksummers



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMS (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X

Remarks: PM-Tom Long (EPR00)  
SAME DAY  
Paykey - RB2100  
Non AFE - N61382

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 226513

**CONDITIONS**

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 226513
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	None	6/13/2023