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: **Enterprise Field Services, LLC**	OGRID: **241602**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **nAPP2235329560**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.650466** Longitude **-107.869131** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral 2B-24**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **12/16/2022**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
F	**23**	**28N**	**10W**	**San Juan**

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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **5 BBLS**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **24.28 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release On December 9, 2022, Enterprise had a release of natural gas and natural gas liquids from the Lateral 2B-24. The pipeline was isolated, depressurized, locked and tagged out. No fire nor injuries occurred. No waterways were affected. Enterprise began repairs and remediation on December 16, 2022 and determine the release reportable per NMOCD regulation due to the volume of impacted subsurface soil. The remediation was completed on December 20, 2022. The final excavation dimensions measured approximately 14.5 feet long by eight (8) feet wide by eight (8) feet deep. A total of 48 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: Thomas Long Date: 5-22-2023

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: Nelson Velez Date: 05/23/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Lateral 2B-24 (12/16/22)
Unit Letter F, S23 T28N R10W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2235329560

May 8, 2023

Ensolum Project No. 05A1226224

Prepared for:

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

Prepared by:

Landon Daniell
Staff Geologist

Kyle Summers
Senior Managing Geologist

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral 2B-24 (12/16/22) (Site)
NM EMNRD OCD Incident ID No.	NAPP2235329560
Location:	36.650466° North, 107.869131° West Unit Letter F, Section 23, Township 28 North, Range 10 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico (NM) Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On December 9, 2022, Enterprise identified a release of natural gas from the Lateral 2B-24 pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On December 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 19.15.29 New Mexico Administrative Code (NMAC), 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). No PODs with recorded depths to water were identified in the same Public Land Survey System (PLSS) section as the Site, and no PODS were identified in the adjacent PLSS sections (**Figure A**, **Appendix B**).

- Two cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the same PLSS section as the Site, and seven were identified in the adjacent

PLSS sections. These nine CPWs are depicted on **Figure B** (**Appendix B**). The four closest CPWs are located near the McClanahan A#1, A#2, and A#3, McClanahan #550, #15, and #9, Cain #11E, and Kutz Canyon #500 well locations. Documentation for the cathodic protection well located near the McClanahan A#1, A#2, and A#3 well locations indicates a depth to water of approximately 155 feet below grade surface (bgs). This cathodic protection well is located approximately 0.47 miles south of the Site and is approximately 112 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the McClanahan #550, #15, and #9 well locations indicates a depth to water of approximately 310 feet bgs. This cathodic protection well is located approximately 0.50 miles north of the Site and is approximately 123 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Cain #11E well location indicates a depth to water of approximately 180 feet bgs. This cathodic protection well is located approximately 0.79 miles northwest of the Site and is approximately 23 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Kutz Canyon #500 well location indicates a depth to water of approximately 200 feet bgs. This cathodic protection well is located approximately 1.2 miles southwest of the Site and is approximately 33 feet lower 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[1]	**Method**	**Limit**
Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
TPH (GRO+DRO+MRO)[2]	EPA SW-846 Method 8015	100 mg/kg
BTEX[3]	EPA SW-846 Method 8021 or 8260	50 mg/kg
Benzene	EPA SW-846 Method 8021 or 8260	10 mg/kg

[1] – Constituent concentrations are in milligrams per kilogram (mg/kg).
[2] – Total Petroleum Hydrocarbons (TPH). Gasoline Range Organics (GRO). Diesel Range Organics (DRO). Motor Oil/Lube Oil Range Organics (MRO).
[3] – Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX).

3.0 SOIL REMEDIATION ACTIVITIES

On December 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, West States Energy Contractors provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final pipeline excavation measured approximately 14.5 feet long and 8 feet wide at the maximum extents. The maximum depth of the excavation measured approximately eight feet bgs. The flow path excavation measured approximately 96 feet long and 0.25 to 1 foot wide, with an approximate depth of 0.5 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of silty sand.

Approximately 48 cubic yards (yd^3) of petroleum hydrocarbon-affected soils and one barrel (bbl) 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**. After acceptable analytical results were obtained, the excavation was backfilled with imported fill and laboratory-confirmed stockpiled soil 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® 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 seven composite soil samples (S-1 through S-7) from the pipeline excavation and two composite soil samples (FP-1 and FP-2) from the flow path excavation for laboratory analysis. In addition, two composite soil samples (SP-1 and SP-2) were collected from segregated, apparently unaffected stockpiled soils to determine if the material was suitable to use as backfill. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft^2) or less sample area 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**.

First Sampling Event

On December 16, 2022, the first sampling event 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-5 (3'-5') was collected from the floor of the excavation. Composite soil samples S-1 (0'-5') and S-3 (0'-5') were collected from the sloped walls of the excavation. Composite soil samples S-2 (0'-3') and S-4 (0'-5') were collected from the walls of the excavation. Composite soil samples SP-1 and SP-2 were collected from the segregated stockpiled soils to verify that the soil did not exhibit COC impact and that it was suitable for use as backfill.

The southern wall was sloped after the collection of soil sample S-4, and the soil associated with S-4 was stockpiled separately from SP-1 and SP-2.

Subsequent soil analytical results identified TPH and chloride concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil sample S-5.

Second Sampling Event

In response to the exceedances of composite sample S-5 during the first sampling event, the excavation was extended in that area. The impacted soils were removed by excavation and transported to the landfarm for disposal/remediation. On December 20, 2022, the second sampling event 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 samples S-6 (3'-6') and S-7 (5'-8') were collected from the floor of the excavation to replace sample S-5 that had exceeded closure criteria. Composite soil sample FP-1 (0.25) was collected from the flow path.

Subsequent soil analytical results identified TPH and chloride concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil sample FP-1. In response to the exceedances the flow path was further excavated. Impacted soil associated with sample FP-1 was removed by excavation and transported to the landfarm for disposal/remediation.

Third Sampling Event

On January 10, 2023, a third sampling event was performed. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil sample FP-2 (0.25' to 0.5') was collected from the flow path excavation to replace sample FP-1 that had exceeded closure criteria standards.

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 benzene, 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-4, S-6, S-7, FP-2, SP-1, and SP-2) to the applicable NM EMNRD OCD closure criteria. The soils associated with composite soil samples S-5 and FP-1 were excavated and removed from the Site, and are therefore, not included in the following discussion. The laboratory analytical results are summarized in **Table 1** (**Appendix F**).

- The laboratory analytical results for all composite soil samples associated with soil remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD criteria of 10 mg/kg.

- The laboratory analytical results for all composite soil samples associated with soil remaining at the Site indicate that total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for all composite soil samples associated with soil 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 applicable NM EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for composite soil samples S-1, S-2, S-4, and SP-1 indicate chloride concentrations ranging from 80 mg/kg (S-2) to 110 mg/kg (S-1 and SP-1), which are less than the applicable NM EMNRD OCD criteria of 600 mg/kg. The laboratory analytical results for all other composite soil samples indicate that chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD criteria of 600 mg/kg.

7.0 RECLAMATION AND REVEGETATION

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

8.0 FINDINGS AND RECOMMENDATION

- Eleven composite soil samples were collected from the Site. Based on laboratory analytical results, no benzene, BTEX, chloride, or combined TPH GRO/DRO/MRO exceedances were identified in the soils remaining at the Site.

- Approximately 48 yd^3 of petroleum hydrocarbon-affected soils and one bbl 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.

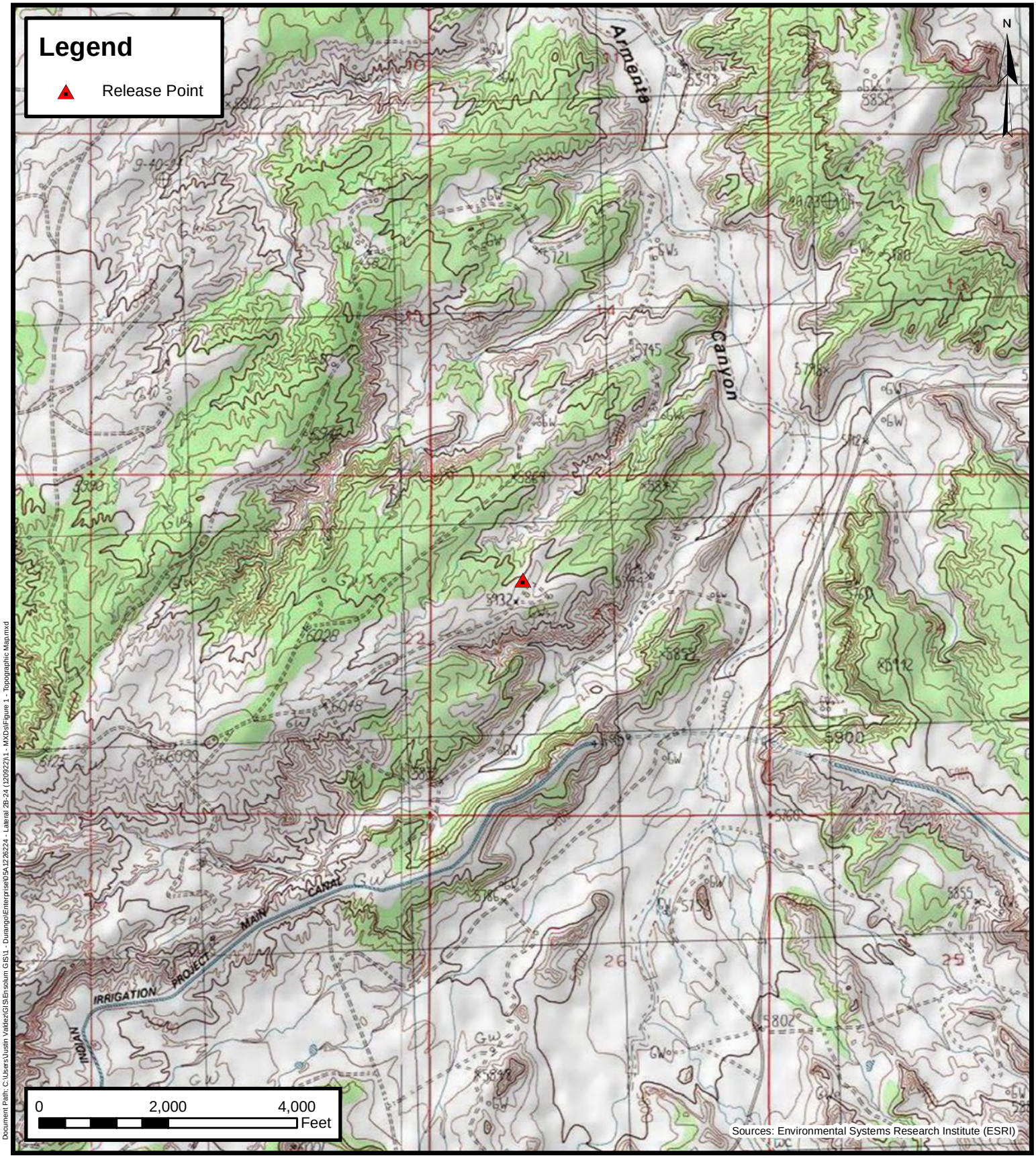
9.3 Reliance

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.

ENSOLUM

APPENDIX A

Figures



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092223)\1 - MXDs\Figure 1 - Topographic Map.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Topographic Map

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
1

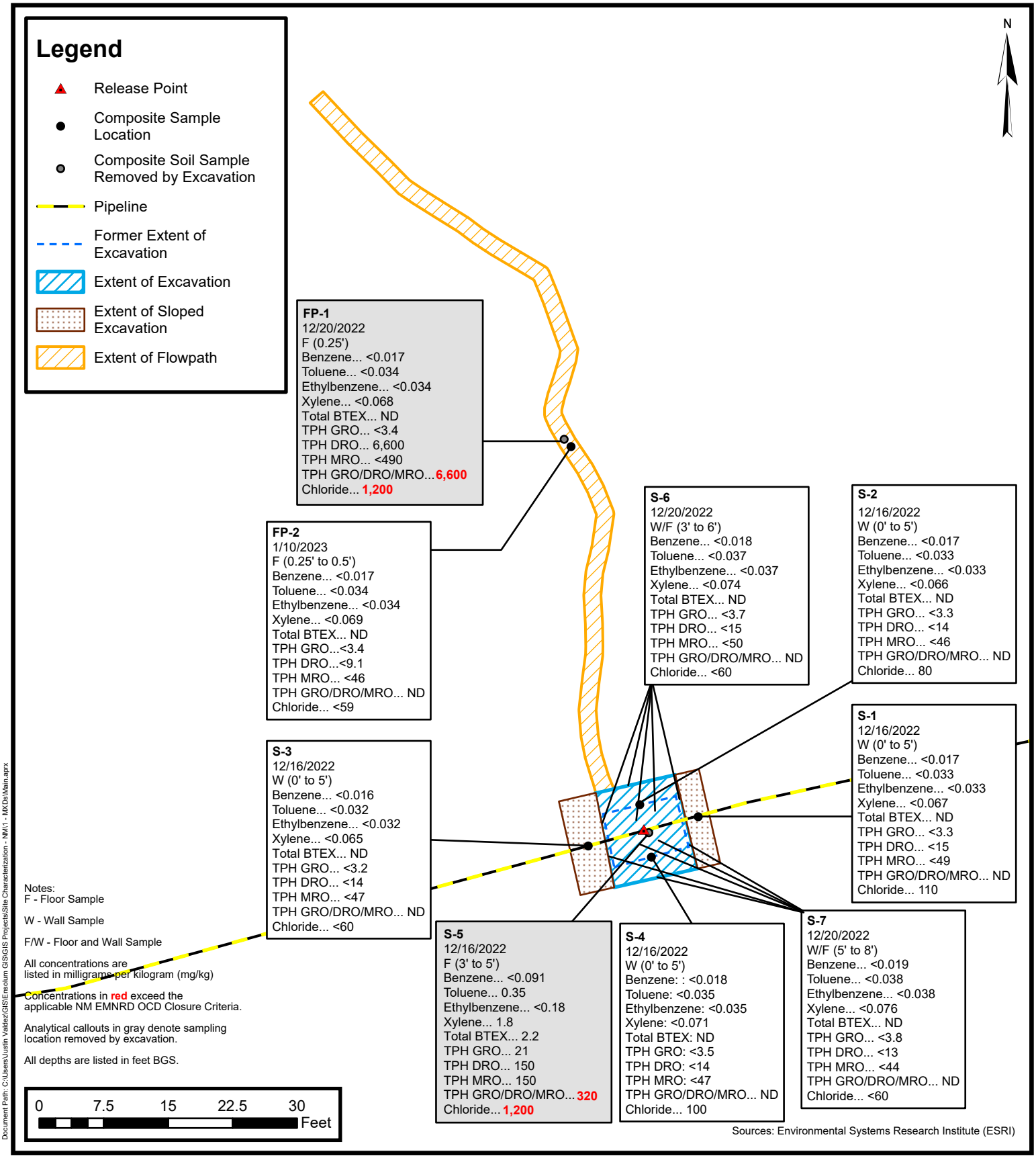
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092210\1 - MXDs\Figure 2 - Site Vicinity Map.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Vicinity Map

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
2



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Map with Soil Analytical Results

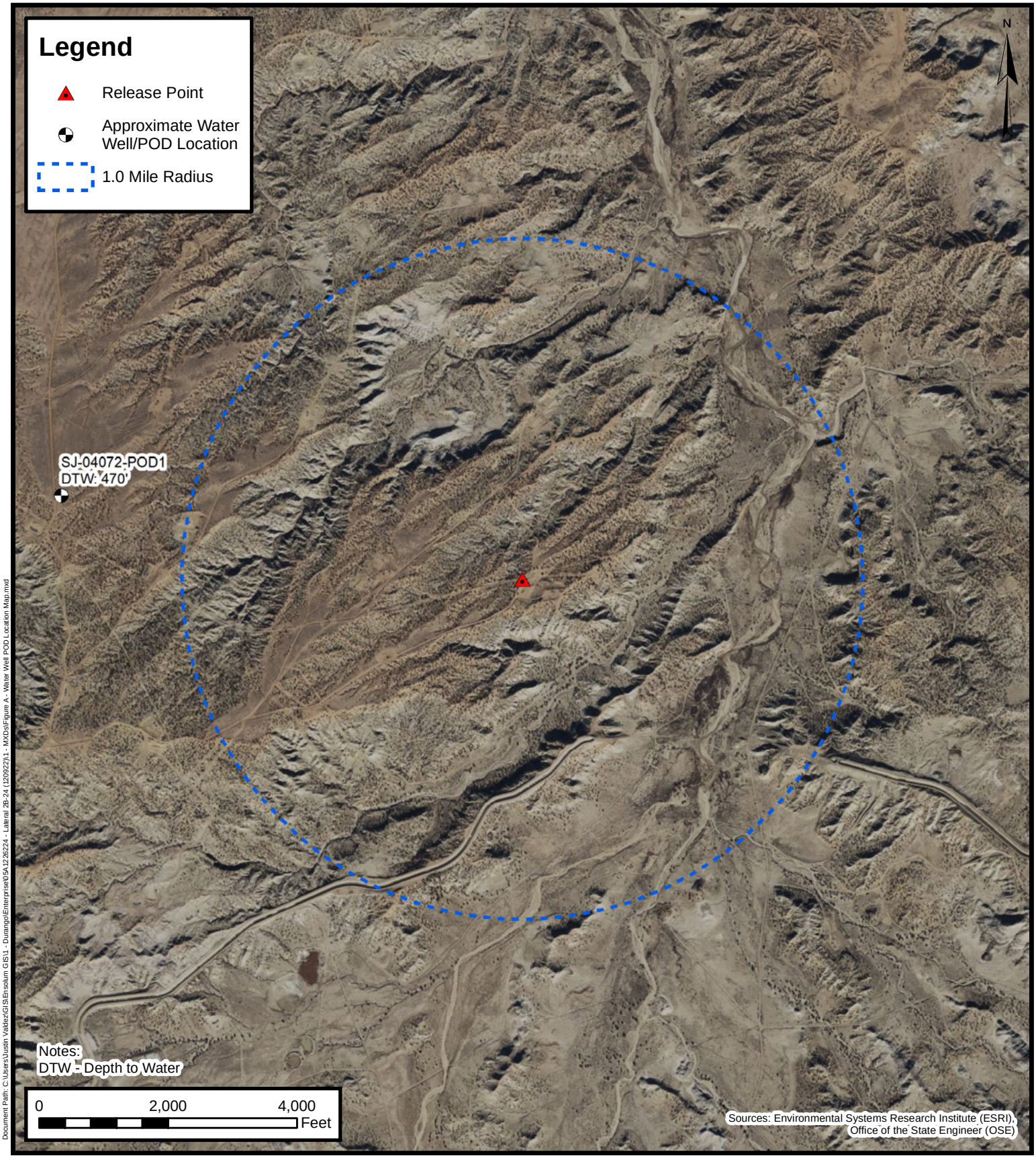
Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466° N, 107.869131° W

FIGURE
3

ENSOLUM

APPENDIX B

Siting Figures and Documentation



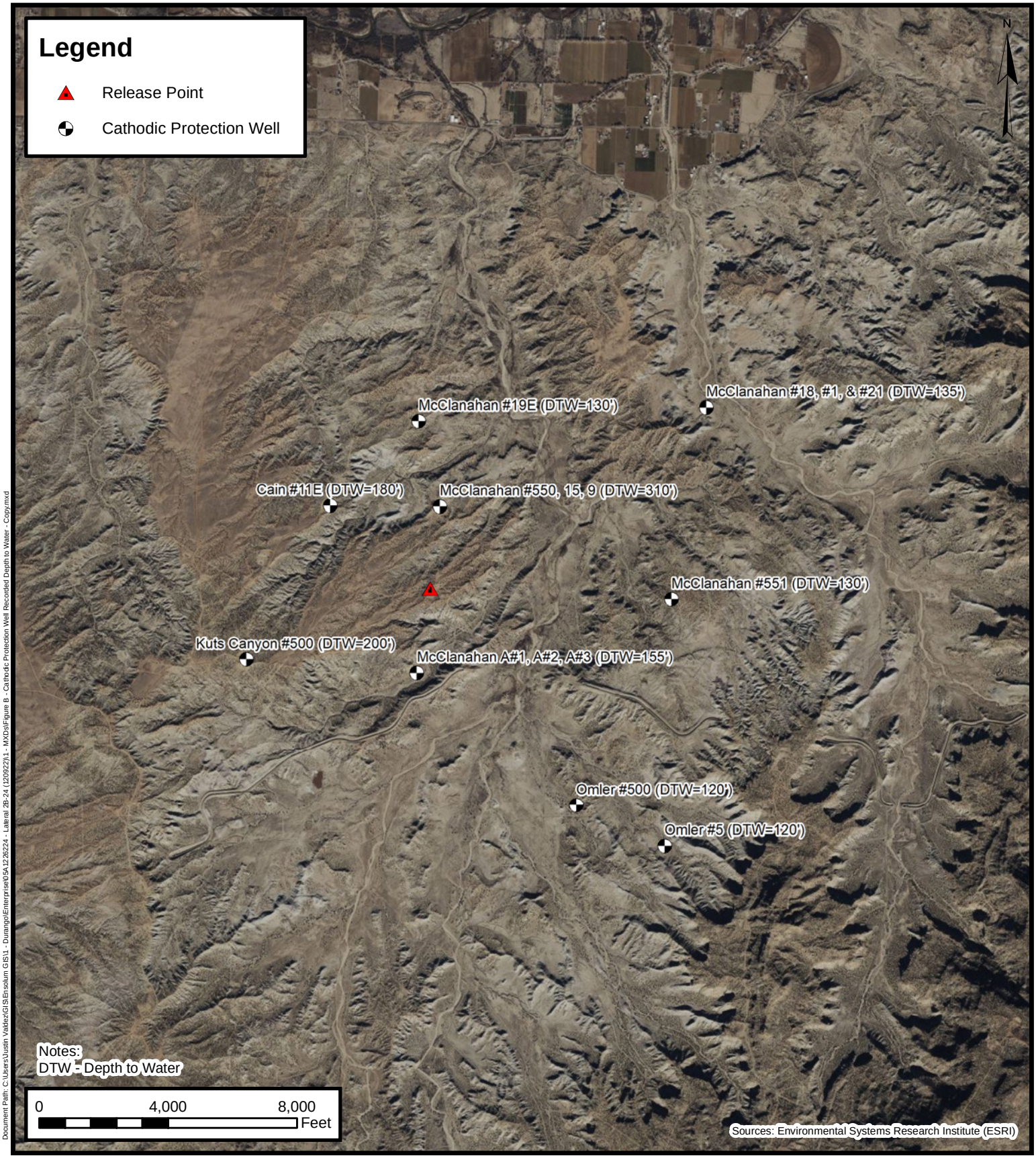
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092223)\1 - MXDs\Figure A - Water Well POD Location Map.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

1.0 MILE RADIUS WATER WELL/ POD LOCATION MAP

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
A



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092223)\1 - MXDs\Figure B - Cathodic Protection Well Recorded Depth to Water - Copy.mxd

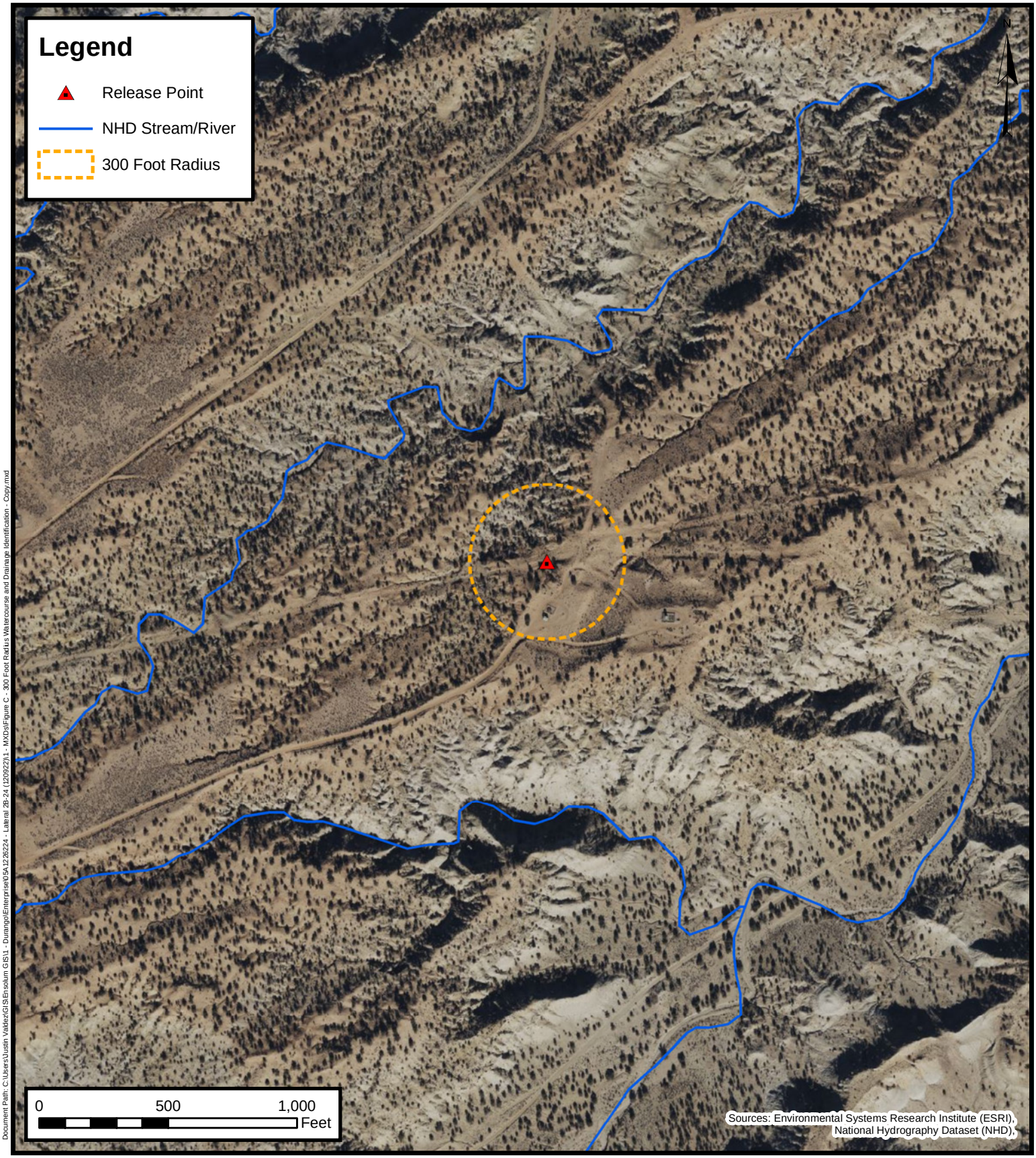
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE

B



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (120922)\1 - MXDs\Figure C - 300 Foot Radius Watercourse and Drainage Identification - Copy.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Watercourse and Drainage Identification
Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
C

Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092210\1 - MXDs\Figure D - 300 Foot Radius Occupied Structure Identification - Copy.mxd

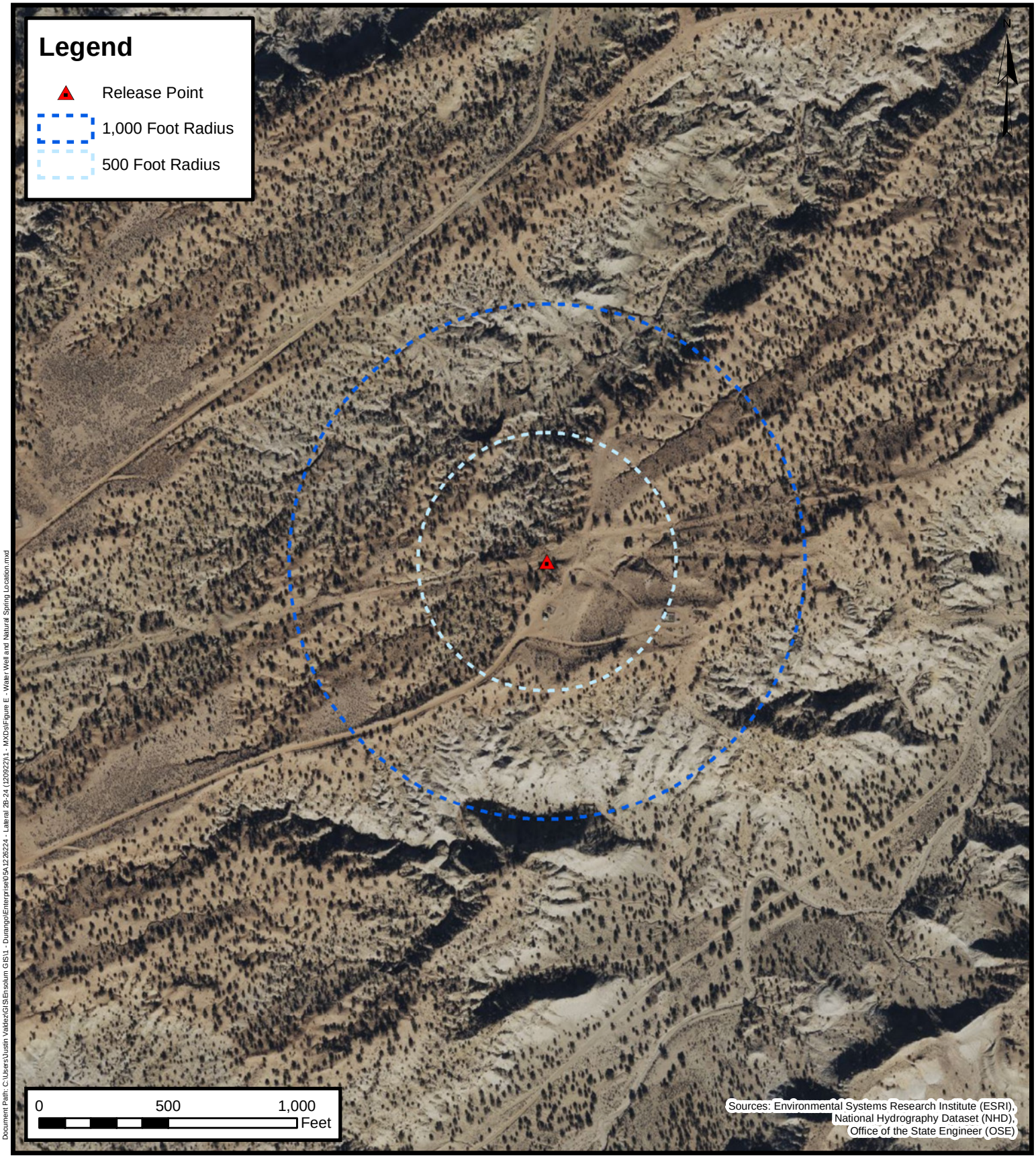
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Occupied Structure Identification

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE

D



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092\2\1 - MXDs\Figure E - Water Well and Natural Spring Location.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

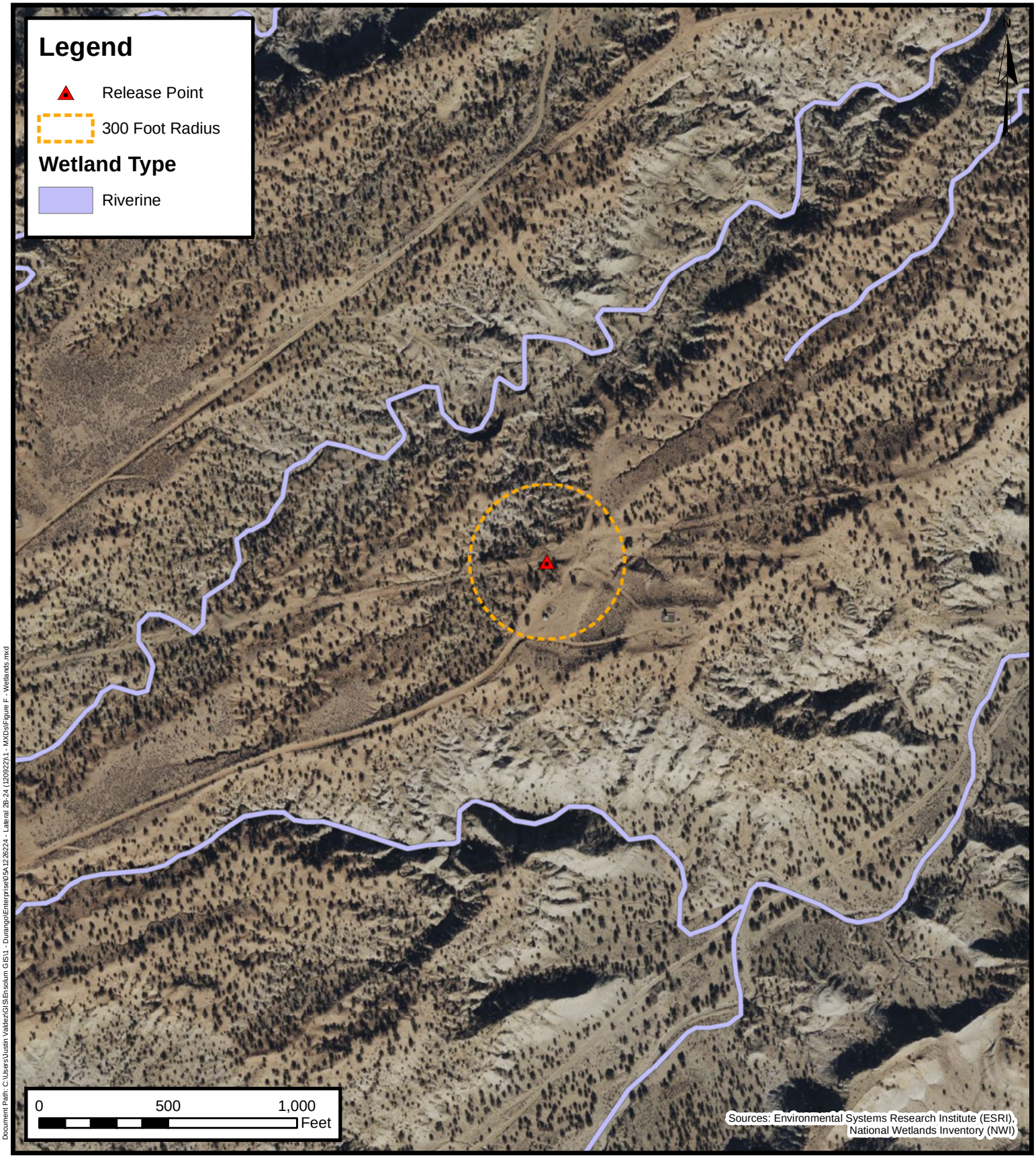
Water Well and Natural Spring Location

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224

Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE

E



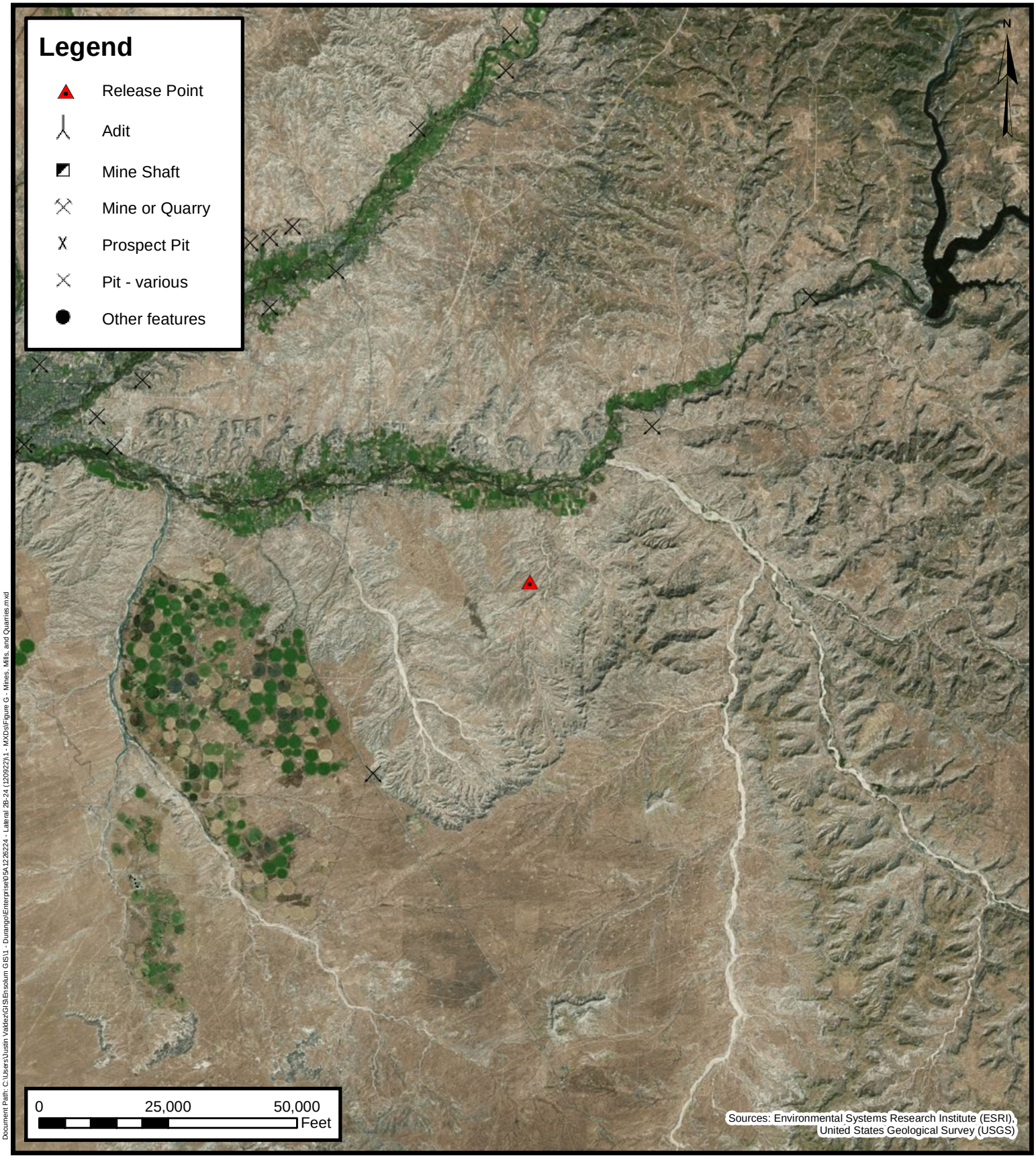
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (120922)\1 - MXDs\Figure F - Wetlands.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Wetlands

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
F



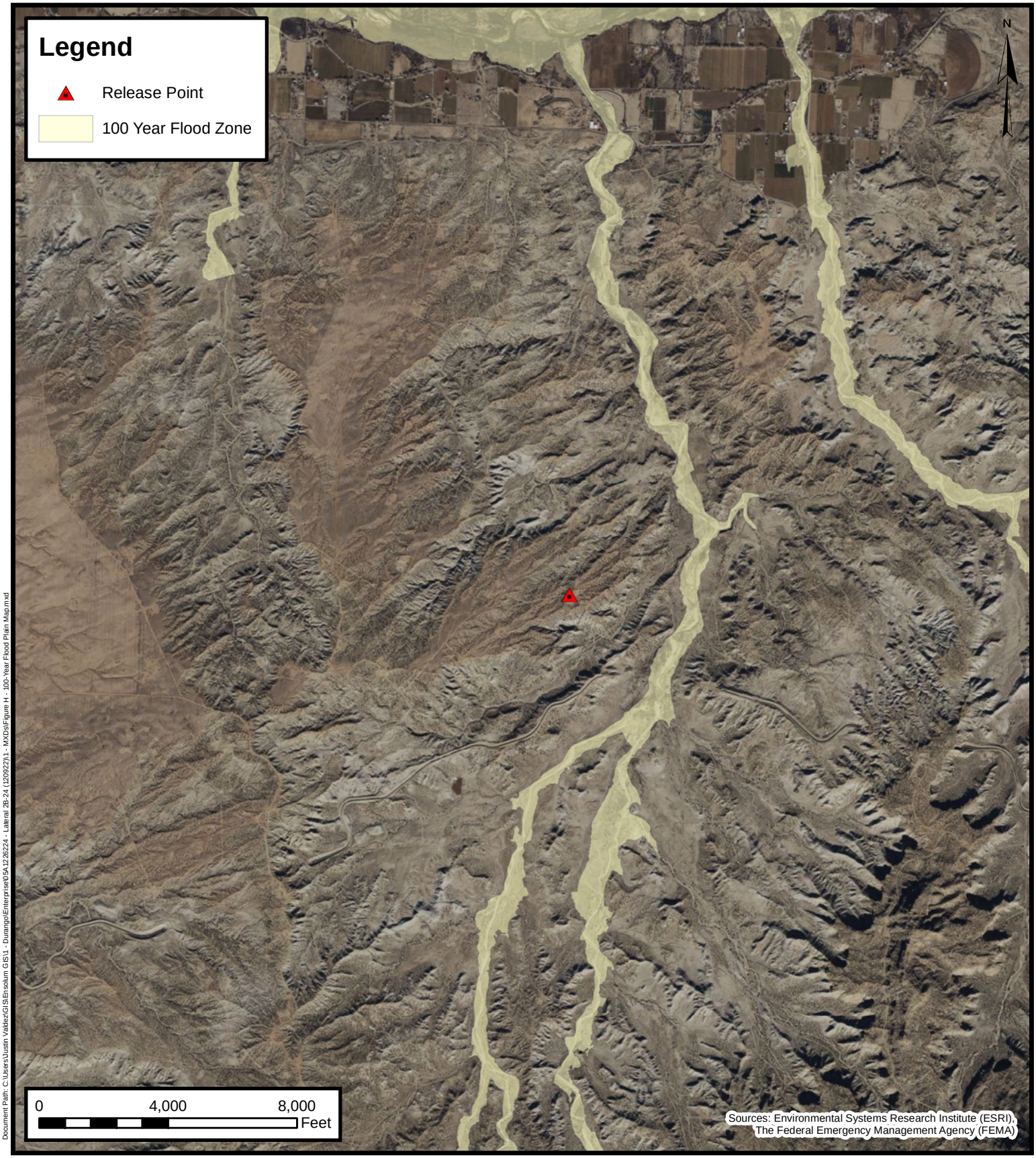
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (12092210\1 - MXDs\Figure G - Mines, Mills, and Quarries.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Mines, Mills, and Quarries

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
G



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Enterprise\05A1226224 - Lateral 2B-24 (120922)\1 - MXDs\Figure H - 100-Year Flood Plain Map.mxd

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

100-Year Flood Plain Map

Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Project Number: 05A1226224
Unit Letter F, S23, T28, R10W, San Juan County, New Mexico
36.650466, -107.869131

FIGURE
H

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 23, 13, 14, 15, 22, 24, 25, 26, 27 **Township:** 28N **Range:** 10W

3708

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

30-045-28109

Operator Meridian Oil Co. Location: Unit M Sec. 22 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced

Kutz Canyon #500

Elevation 589' Completion Date 2-14-93 Total Depth 415 Land Type F

Casing Strings, Sizes, Types & Depths 2/2 set 99' of 8" PVC Casing.

No Gas, Water, or Boulders were encountered during casing

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

with 21 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. 200 and 300 - water is clear

Depths gas encountered: no gas

Ground bed depth with type & amount of coke breeze used: 415' with 60 (100 lb) sacks of Loresco SW

Depths anodes placed: 395' to 405'

Depths vent pipes placed: Bottom to surface

Vent pipe perforations: up to 140'

Remarks:

RECEIVED
JAN 31 1994
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.

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

LABORATORY REPORT

OIL-FIELD WATER ANALYSIS

Lab Number: 930220-3
Client: Meridian Oil
Sample ID: Kutz Canyon #500
Location: M22-28-10

Date Sampled: 01-14-93
Date Received: 02-20-93
Date Analyzed: 02-20-93
Date Reported: 02-21-93

DISSOLVED SOLIDS:

	me/L	mg/L	Detection Limit, mg/L
Calcium, Ca++	1.0	20.8	1.0
Magnesium, Mg++	0.1	1.0	1.0
Sodium, Na+ (calc)	12.0	275	5.0
Chloride, Cl-	0.1	5.0	2.0
Sulfate, SO4--	10.9	525	5.0
Bicarbonate, HCO3-	ND	ND	5.0
Carbonate,CO3--	1.6	48.0	1.0
Hydroxide, OH-	0.4	6.8	1.0
Total Dissolved Solids (calculated):		880	10.0

OTHER PROPERTIES:

pH (units):	8.7
reisistivity (ohm-meters):	11
specific gravity at 60F:	1.0036
room temperature (F):	72

ND = Not Detected at the stated dectection limit

Methods: American Petrolium Institute, "Recommended Practice for Analysis of Oil-Field Waters;" 2nd edition.

Comments: Fruitland Coal; SJ, NM; Groundbed
Sampled by R. Smith

analyst

3720

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

Operator Meridian Oil Co. Location: Unit M Sec. 23 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced 30-045-07272, 30-045-13069, McCLANAHAN #1, #2, & #3 30-045-24757

Elevation 5811 Completion Date 2-22-93 Total Depth 413 Land Type F

Casing Strings, Sizes, Types & Depths 2/18 Set 99' of 8" PVC Casing. NO GAS, WATER, or Boulders were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented WITH 21 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. 155' and was clear.

Depths gas encountered: No gas

Ground bed depth with type & amount of coke breeze used: 413' with 20 (1001b) sacks Loresco S.W. and 80 (5016) Asbury.

Depths anodes placed: #1 at 390' and #5 at 175'

Depths vent pipes placed: Bottom to surface

Vent pipe perforations: Up to 150'

Remarks:

RECEIVED
JAN 31 1994
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.

Leila Fellows
analyst

BRIONES LAW FIRM TEL No.5053253311 Mar 21,93 16:02 No.001 P.16

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

LABORATORY REPORT

OIL-FIELD WATER ANALYSIS

6160W

Lab Number:	25930315-08	Date Sampled:	02-22-93
Client:	Meridian Oil	Date Received:	03-15-93
Sample ID:	McClanahan A #2,#1,#3 G.bed	Date Analyzed:	03-17-93
Location:	M23-28-10	Date Reported:	03-18-93

DISSOLVED SOLIDS:

	me/L	mg/L	Detection Limit, mg/L
Calcium, Ca++	7.9	158	1.0
Magnesium, Mg++	0.4	5	1.0
Sodium, Na+ (calc)	50.5	1,160	5.0
Chloride, Cl-	0.7	25	2.0
Sulfate, SO4--	52.9	2,540	5.0
Bicarbonate, HCO3-	4.8	293	5.0
Carbonate,CO3--	0.4	12	1.0
Hydroxide, OH-	ND	ND	1.0
Total Dissolved Solids (calculated):		4,200	10.0

OTHER PROPERTIES:

pH (units):	8.1
reisistivity (ohm-meters):	2.2
specific gravity at 60F:	1.0071
room temperature (F):	72

ND = Not Detected at the stated dectection limit

Comments: DK, PC, FC Formation.
San Juan County, New Mexico
Sampled by R. Smith

Methods: American Petroleum Institute, "Recommended Practice for Analysis of Oil-Field Waters;" 2nd edition.

Leila Fellows
analyst

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

LABORATORY REPORT

OIL-FIELD WATER ANALYSIS

Lab Number: 25930315-08
Client: Meridian Oil
Sample ID: McClanahan A #2,#1,#3 G.bed
Location: M23-28-10

Date Sampled: 02-22-93
Date Received: 03-15-93
Date Analyzed: 03-17-93
Date Reported: 03-18-93

DISSOLVED SOLIDS:

	me/L	mg/L	Detection Limit, mg/L
Calcium, Ca++	7.9	158	1.0
Magnesium, Mg++	0.4	5	1.0
Sodium, Na+ (calc)	50.5	1,160	5.0
Chloride, Cl-	0.7	25	2.0
Sulfate, SO4--	52.9	2,540	5.0
Bicarbonate, HCO3-	4.8	293	5.0
Carbonate,CO3--	0.4	12	1.0
Hydroxide, OH-	ND	ND	1.0
Total Dissolved Solids (calculated):		4,200	10.0

OTHER PROPERTIES:

pH (units):	8.1
reisistivity (ohm-meters):	2.2
specific gravity at 60F:	1.0071
room temperature (F):	72

ND = Not Detected at the stated dectection limit

Comments: DK, PC, PC Formation.
San Juan County, New Mexico
Sampled by R. Smith

Methods: American Petroleum Institute, "Recommended Practice for Analysis of Oil-Field Waters;" 2nd edition.

Leila Lefthand
analyst

#9 30-045-07430
#15 30-045-07423
#550 30-045-27926

700

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

4207e)

Operator Meridian Oil Location: Unit N Sec. 14 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced McClanahan # 550, 15, 9

Elevation 5800 Completion Date 12-6-91 Total Depth 497' Land Type F

Casing Strings, Sizes, Types & Depths 8" PVC surface casing,

If Casing Strings are cemented, show amounts & types used yes with 24 Bags of Neat Cement

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

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 310' fresh

Depths gas encountered: NA

Ground bed depth with type & amount of coke breeze used: 497' 7600 lbs Asbury 4518 flo coke

Depths anodes placed: 469, 460, 450, 440, 430, 415, 405, 395, 385, 375, 365, 350

Depths vent pipes placed: 497', ~~7600 lbs Asbury 4518 flo coke~~

Vent pipe perforations: Bottom 300'

Remarks:

RECEIVED
FEB 24 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.

CPS GROUND BED CONSTRUCTION WORKSHEET

CPS#	P/L NAME(s), NUMBER(s)					
4207 W	MCCLANAHAN #550 15, 9					
WO #	TOTAL	VOLTS	AMPS	OHMS	DATE	NAME
K443		11.7	28.9	.40	12-6-91	MW, KB

REMARKS (notes for construction log)

100' of casing, 24 Bags cement, water at 320', Perforated Bottom 300'

150 Bags of Asbury 4518, 1 Bag of Loresco type SW

DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #
100			295			490	1.3		685		
105			300			495	TO 497		690		
110			305			500			695		
115			310			505			700		
120			315			510			ANODE #	DEPTH	NO COKE
125			320	1.7		515					
130			325	1.6		520			1	469	2.4
135			330	1.8		525			2	460	2.8
140			335	1.2		530			3	450	3.4
145			340	.9		535			4	440	2.8
150			345	2.3		540			5	430	2.6
155			350	2.4	12	545			6	415	2.5
160			355	1.9		550			7	405	3.0
165			360	2.1		555			8	395	2.4
170			365	2.1	11	560			9	385	2.9
175			370	2.1		565			10	375	2.5
180			375	2.0	10	570			11	365	2.4
185			380	2.1		575			12	350	2.4
190			385	2.3	9	580			13		
195			390	2.1		585			14		
200			395	2.1	8	590			15		
205			400	2.2		595			16		
210			405	2.4	7	600			17		
215			410	2.3		605			18		
220			415	2.1	6	610			19		
225			420	1.6		615			20		
230			425	1.1		620			21		
235			430	2.2	5	625			22		
240			435	2.4		630			23		
245			440	2.6	4	635			24		
250			445	2.6		640			25		
255			450	3.2	3	645			26		
260			455	2.8		650			27		
265			460	2.6	2	655			28		
270			465	2.6		660			29		
275			470	2.0	1	665			30		
280			475	1.0		670					
285			480	.7		675					
290			485	1.0		680					

ANODE #	DEPTH	NO COKE	FULL COKE
1	469	2.4	5.8
2	460	2.8	6.7
3	450	3.4	7.4
4	440	2.8	6.6
5	430	2.6	6.2
6	415	2.5	6.6
7	405	3.0	8.1
8	395	2.4	7.4
9	385	2.9	8.6
10	375	2.5	7.9
11	365	2.4	8.0
12	350	2.4	8.4

DISTRIBUTION — original — permanent CPS FILE
copy — Division Corrosion Supervisor
copy — Region Corrosion Specialist

#19E 30-045-24107

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

Operator Meridian Oil Inc. Location: Unit E Sec. 14 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced Mc Clanahan #19E

Elevation 5900 Completion Date 2-15-95 Total Depth _____ Land Type F

Casing Strings, Sizes, Types & Depths 100' of 8" P.V.C.

If Casing Strings are cemented, show amounts & types used Cemented with 17 sacks of type II cement.

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

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 130' and was clear.

Depths gas encountered: _____

Ground bed depth with type & amount of coke breeze used: _____

Depths anodes placed: _____

Depths vent pipes placed: Bottom to Surface

Vent pipe perforations: Up to 120'

Remarks: _____

RECEIVED
JAN 11 1996
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.

100' 17 sacks

#11E 30-045-23912

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

Operator Meridian Oil Location: Unit O Sec. 15 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced Cain #11E

Elevation 5700 Completion Date 2-13-95 Total Depth 430 Land Type F

Casing Strings, Sizes, Types & Depths 8" P.V.C. to 100'

If Casing Strings are cemented, show amounts & types used Used 17 sacks of type II cement.

If Cement or Bentonite Plugs have been placed, show depths & amounts used no plugs

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 180' and was clear

Depths gas encountered: No gas

Ground bed depth with type & amount of coke breeze used: 430' with 57 (5700lb) of Lonesco SW

Depths anodes placed: #1 is at 415 and #15 is at 230

Depths vent pipes placed: Up to 180' Bottom to Surface

Vent pipe perforations: Up to 180'

Remarks:

RECEIVED
JAN 11 1996
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.

30-045-07134

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

Operator Meridian Oil Co. Location: Unit O Sec. 25 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced

Ohlen #5

Elevation 5872 Completion Date 2-23-73 Total Depth 413 Land Type F

Casing Strings, Sizes, Types & Depths 2 @ 25' 99' of 8" PVC Casing

No Gas, Water, or Boulders were Encountered During Casing.

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

With 24 Sacks

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

No plugs

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 120' and was clear.

Depths gas encountered: No gas

Ground bed depth with type & amount of coke breeze used: 413' with 160 (5016) sacks of Asbury

Depths anodes placed: #1 at 327 and #15 at 145

Depths vent pipes placed: Bottom to Surface

Vent pipe perforations: up to 140'.

Remarks:

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.

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

LABORATORY REPORT

OIL-FIELD WATER ANALYSIS

2397W

Lab Number: 25930315-06
Client: Meridian Oil
Sample ID: Omler #5 groundbed
Location: 025-28-10

Date Sampled: 02-23-93
Date Received: 03-15-93
Date Analyzed: 03-17-93
Date Reported: 03-18-93

DISSOLVED SOLIDS:

	me/L	mg/L	Detection Limit, mg/L
Calcium, Ca++	23.2	465	1.0
Magnesium, Mg++	5.1	62	1.0
Sodium, Na+ (calc)	25.1	577	5.0
Chloride, Cl-	0.4	13	2.0
Sulfate, SO4--	47.6	2,290	5.0
Bicarbonate, HCO3-	5.4	329	5.0
Carbonate, CO3--	ND	ND	1.0
Hydroxide, OH-	ND	ND	1.0
Total Dissolved Solids (calculated):		3,730	10.0

OTHER PROPERTIES:

pH (units):	8.1
resistivity (ohm-meters):	2.2
specific gravity at 60F:	1.0073
room temperature (F):	72

ND = Not Detected at the stated dectection limit

Comments: Fruitland Coal
San Juan County, New Mexico
Sampled by R. Smith

Methods: American Petroleum Institute, "Recommended Practice for Analysis of Oil-Field Waters;" 2nd edition.

Leila Lahlum
analyst

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

LABORATORY REPORT

OIL-FIELD WATER ANALYSIS

Lab Number: 25930315-06 2397 W
Client: Meridian Oil
Sample ID: Omler #5 groundbed
Location: 025-28-10

Date Sampled: 02-23-93
Date Received: 03-15-93
Date Analyzed: 03-17-93
Date Reported: 03-18-93

DISSOLVED SOLIDS:

	me/L	mg/L	Detection Limit, mg/L
Calcium, Ca++	23.2	465	1.0
Magnesium, Mg++	5.1	62	1.0
Sodium, Na+ (calc)	25.1	577	5.0
Chloride, Cl-	0.4	13	2.0
Sulfate, SO4--	47.6	2,290	5.0
Bicarbonate, HCO3-	5.4	329	5.0
Carbonate,CO3--	ND	ND	1.0
Hydroxide, OH-	ND	ND	1.0
Total Dissolved Solids (calculated):		3,730	10.0

OTHER PROPERTIES:

pH (units):	8.1
reisistivity (ohm-meters):	2.2
specific gravity at 60F:	1.0073
room temperature (F):	72

ND = Not Detected at the stated dectection limit

Comments: Fruitland Coal
San Juan County, New Mexico
Sampled by R. Smith

Methods: American Petroleum Institute, "Recommended Practice for Analysis of Oil-Field Waters;" 2nd edition.

Sheila Hoffman
analyst

 1419 #500 30-045-27203

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 L Sec. 25 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced OMLER #500

cps 2156w

Elevation 5825 Completion Date 6/23/89 Total Depth 400' 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. 120'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 300', 290', 280', 270', 260', 250', 195', 155', 145', 135'

Depths vent pipes placed: N/A

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.

FM-07-0238 (Rev. 10-82)

WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

Comp 7-7-89 gs

Drilling Log (Attach Hereto) ☐

Completion Date 6-23-89

CPS #	Well Name, Line or Plant	Work Order #	Static:	Ins Union Check
2,156 W	Omler 500	355810	-817 /V	☑ Good ☐ Bad

Location	Anode Size	Anode Type	Size Bit.
L25-28-10	2" x 60"	Duriron	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs Coke Used	Lost Circulation Mat'l Used	No Sacks Mud Used
400	340	5 hrs	—	—	—

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	300	290	280	270	260	250	195	155	145	135
Anode Output (Amps)	5.2	5.9	5.9	5.2	4.9	5.3	5.5	5.1	5.4	5.6

	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Depth										
Anode Output (Amps)										

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.92	Amps 25	Ohms .47		

Remarks: Driller said water was at 120'. Vent pipe is perforated up to 120'. Suggest we build power to this location, from approx. 4/10 mi. to the East.

3870.00 ✓
599.00 ✓
600.00 ✓
34.00 ✓
105.00 ✓
312.50
237.00
4552.50
227.88

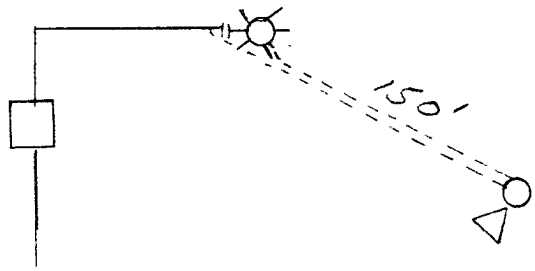
Rectifier Size: 40 V 16 A
Addn'l Depth
Depth Credit: 160' 3.75
Extra Cable: 170' .30
Ditch & 1 Cable: 150' .70
25' Meter Pole:
20' Meter Pole: 312.50
10' Stub Pole:
J box 237.00

All Construction Completed

Randy Smith
(Signature)

GROUND BED LAYOUT SKETCH

4785.38 OKJ



N

2,5-2 5825

645 E

30-045-27866

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

2269

Operator MERIDIAN OIL Location: Unit G Sec. 24 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced NMC CLANAHAN #551

Elevation 5875 Completion Date 12-5-91 Total Depth 395' Land Type F

Casing Strings, Sizes, Types & Depths 8" PVC SURFACE CASING 95' DEEP

If Casing Strings are cemented, show amounts & types used YES, WITH 22 BAGS NEAT CEMENT

If Cement or Bentonite Plugs have been placed, show depths & amounts used NO

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. FRESH 130'

Depths gas encountered: NO

Ground bed depth with type & amount of coke breeze used: 395' WITH 5400 lbs of Loresco Type SW

Depths anodes placed: 375, 360, 350, 340, 330, 320, 310, 285, 275, 265, 255,

Depths vent pipes placed: 395'

Vent pipe perforations: BOTTOM 270

Remarks:

RECEIVED
FEB 24 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.

CPS GROUND BED CONSTRUCTION WORKSHEET

CPS# 2269.w	P/L NAME(s), NUMBER(s)	M^C-ANAHAN #551				
WO # K444	TOTAL	VOLTS 11.82	AMPS 29.1	OHMS .406	DATE 12.5.91	NAME MRW

REMARKS (notes for construction log) 95 CASING 22 SACKS CEMENT

G24-28-10 WATER AT 130' Drilled 400', LOGGED 395

Perforated bottom 270'

54 bags Lonesco

DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #
100			295	1.0		490			685		
105			300	1.1		495			690		
110			305	2.5		500			695		
115			310	3.1-		505			700		
120			315	3.4		510			ANODE #	DEPTH	NO COKE
125	1.4		320	3.3-		515			1	375	2.6
130	1.6		325	3.4		520			2	360	3.0
135	1.6		330	3.5-		525			3	350	3.5
140	1.6		335	3.7		530			4	340	3.6
145	2.0		340	3.6-		535			5	330	3.5
150	2.0		345	3.9		540			6	320	3.4
155	2.0		350	3.5-		545			7	310	3.1
160	2.2		355	3.4		550			8	285	4.0
165	2.2		360	2.8-		555			9	275	4.0
170	2.2		365	2.2		560			10	265	3.5
175	2.6		370	2.5		565			11	255	3.7
180	2.1		375	2.6		570			12	245	3.4
185	1.9		380	1.8		575			13		
190	1.8		385	2.0		580			14		
195	1.6		390	1.7		585			15		
200	1.5		395		395	590			16		
205	1.0		400			595			17		
210	1.1		405			600			18		
215	1.5		410			605			19		
220	2.0		415			610			20		
225	1.4		420			615			21		
230	1.2		425			620			22		
235	2.4		430			625			23		
240	2.9		435			630			24		
245	3.4-		440			635			25		
250	3.5		445			640			26		
255	3.8-		450			645			27		
260	3.8		455			650			28		
265	3.6-		460			655			29		
270	3.9		465			660			30		
275	4.0-		470			665					
280	3.9		475			670					
285	3.9-		480			675					
290	1.0		485			680					

DISTRIBUTION - original - permanent CPS FILE
copy - Division Corrosion Supervisor
- Region Corrosion Specialist

18 - 30-045-07513
1 - 30-045-07512
21 - 30-045-25362

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

Operator Meridian Oil Inc. Location: Unit A Sec. 13 Twp 28 Rng 10

Name of Well/Wells or Pipeline Serviced

McClanahan #18, #1, and #21

Elevation ____ Completion Date 5/12/94 Total Depth 398' Land Type F

Casing Strings, Sizes, Types & Depths 5/11 Set 99' of 8" PVC Casing. No Gas or Boulders, But Water at 45' Was Encountered During Casing

If Casing Strings are cemented, show amounts & types used Cemented with 30 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 135', And More Fresh Water at 370'. A Water Sample was Taken.

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 398' Depth. Used 103 Sacks of Asbury 218R (5150#)

Depths anodes placed: 345', 335', 320', 310', 290', 275', 265', 235', 225', 215', 205', 190', 180', 170', + 145'

Depths vent pipes placed: Surface to 398'.

Vent pipe perforations: Bottom 275'.

Remarks:

RECEIVED
JAN 20 1995
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.

ENSOLUM

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.

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: ME Eddleman
AFE: N61880

2. Originating Site:
Lateral 2B-24

3. Location of Material (Street Address, City, State or ULSTR):
UL F Section 23 T28N R10W; 36.650466, -107.869131

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 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 48/1 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, 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 12-15-2022, 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: TBD

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 TITLE: Enviro Manager DATE: 12/15/23
SIGNATURE: TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Ensolum Project No. 05A1226224

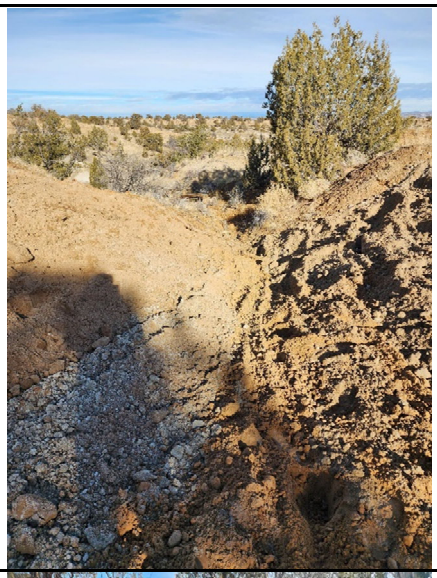
ENSOLUM

Photograph 1 Photograph Description: View of the excavation (first sampling event).	
Photograph 2 Photograph Description: View of the excavation (second sampling event).	
Photograph 3 Photograph Description: View of the flow path (second sampling event).	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Ensolum Project No. 05A1226224

ENSOLUM

Photograph 4 Photograph Description: View of the final flow path excavation.	
Photograph 5 Photograph Description: View of the final flow path excavation.	
Photograph 6 Photograph Description: View of the site after initial restoration.	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Lateral 2B-24 (12/16/22)
Ensolum Project No. 05A1226224

ENSOLUM

Photograph 7 Photograph Description: View of the site after initial restoration.	

ENSOLUM

APPENDIX E

Regulatory Correspondence

From: Kyle Summers
To: Landon Daniell; Ranee Deechilly
Subject: FW: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131
Date: Monday, January 9, 2023 10:14:49 AM
Attachments: image004.png
image005.png
image006.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

PLEASE NOTE OUR NEW CORPORATE ADDRESS:
Ensolum, LLC
8330 LBJ Freeway, Ste. 830
Dallas, TX 75243

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Monday, January 9, 2023 10:03 AM
To: Long, Thomas <tjlong@eprod.com>; slandon@blm.gov
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

[**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 *NOTE NEW EMAIL ADDRESS*
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Monday, January 9, 2023 9:47 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; slandon@blm.gov
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: FW: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

Nelson/Sherrie,

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 January 10, 2023 at 1:00 p.m. at the Lateral 2B-24 flow path 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

Enterprise Products

From: Adeloye, Abiodun A <aadeloye@blm.gov>
Sent: Tuesday, December 27, 2022 7:48 AM
To: Long, Thomas <tjlong@eprod.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Landon, Sherrie C <slandon@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

[Use caution with links/attachments]
Hi, Thomas, please report all ROW related spills to Sherrie Landon. I included her with this reply. She handles all ROW related spills.
Thank you.

Abiodun Adeloye (Emmanuel), NRS
Bureau of Land Management
Farmington Field Office
6251 College Blvd., Suite A
Farmington, NM 87402
Office Phone: 505-564-7665
Cell Phone: 505-635-0984

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, December 23, 2022 4:20 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

Nelson/Emanual,

This email is a inform you that based on the preliminary data, we have completed the remediation at the Newsome #20. We met our 90 day deadline. Call or email if you have any questions.

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

From: Joyner, Ryan N <rjoyner@blm.gov>
Sent: Thursday, December 22, 2022 8:50 AM
To: Long, Thomas <tjlong@eprod.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

[Use caution with links/attachments]
Thomas-

Sorry to have to keep saying this but I do not work for the Farmington Field Office anymore and have

not since July- I've notified you on several occasions. Please contact the Farmington Field Office and find out who you should be in contact with, likely Abiodun (Emanuel) Adeloye. I've CCd him on this message, please direct all your future correspondence regarding any BLM Farmington Field Office work to Abiodun or whomever is the correct contact for that office. Contacting me does not constitute contacting the correct BLM office prior to doing whatever you are asking permission to do, particularly if it is some kind of variance.

Please stop sending me these notifications.

Sincerely,
Ryan Joyner
Assistant Field Manager- Lands and Minerals
Tres Rios Field Office
BLM-Colorado
O.970.385.6289
C.970.799.6619

From: Long, Thomas <tjlong@eprod.com>
Sent: Thursday, December 22, 2022 8:39 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Joyner, Ryan N <rjoyner@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

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 on December 22, 2022 at 3:00 p.m. at the Lateral 2B-24 excavation. One sample failed from Tuesday's sampling event. 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

Enterprise Products

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>

Sent: Tuesday, December 20, 2022 4:11 PM
To: Long, Thomas <tjlong@eprod.com>; Ryan Joyner <rjoyner@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

[Use caution with links/attachments]
Tom,

Thank you for the notice. Per our telecommunication earlier this afternoon, your variance request specifically addressing 19.15.29.12D (1a) NMAC was verbally approved.

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 *NOTE NEW EMAIL ADDRESS*
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Tuesday, December 20, 2022 2:23 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Ryan Joyner <rjoyner@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

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 on December 20, 2022 at 3:00 p.m. at the Lateral 2B-24 excavation. This will probably complete the remediation if all samples pass. 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

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Friday, December 16, 2022 7:26 AM
To: Long, Thomas <tjlong@eprod.com>; Ryan Joyner <rjoyner@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

[Use caution with links/attachments]

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.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

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 *NOTE NEW EMAIL ADDRESS*
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, December 16, 2022 7:19 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Ryan Joyner <rjoyner@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXTERNAL] Lateral 2B-24 - UL F Section 26 T28N R10W; 36.650466, -107.869131

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

Nelson/Ryan,

This email is a notification and a variance request. Enterprise had are release of natural gas and natural gas liquids on the Lateral 2B-24 pipeline on December 9, 2022. The pipeline was isolated, depressurized, locked and tagged out. No fires nor injuries occurred. No waterways were affected. Enterprise began repairs and remediation on December 15, 2022 and determined the release reportable per NMOCD regulation. Enterprise is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Enterprise would like to collect closure samples today December 16, 2022 at 10:00 a.m. at the Lateral 2B-24 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

Enterprise Products

ENSOLUM

APPENDIX F

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Lateral 2B-24 (12/16/22)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[1] (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO)[1] (mg/kg)	Chloride (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**
Composite Soil Samples Removed by Excavation and Transported to the Landfarm for Disposal/Remediation													
S-5	12.16.22	C	3 to 5	<0.091	0.35	<0.18	1.8	2.2	21	150	150	**320**	**1,200**
FP-1	12.20.22	C	0.25	<0.017	<0.034	<0.034	<0.068	ND	<3.4	6,600	<490	**6,600**	**1,200**
Composite Soil Samples Collected from Stockpiled Soils													
SP-1	12.16.22	C	Stockpile	<0.020	<0.040	<0.040	<0.079	ND	<4.0	<15	<50	ND	110
SP-2	12.16.22	C	Stockpile	<0.017	<0.035	<0.035	<0.070	ND	<3.5	<15	<50	ND	<60
Flow Path Composite Soil Sample													
FP-2	1.10.23	C	0.25 to 0.5	<0.017	<0.034	<0.034	<0.069	ND	<3.4	<9.1	<46	ND	<59
Excavation Composite Soil Samples													
S-1	12.16.22	C	0 to 5	<0.017	<0.033	<0.033	<0.067	ND	<3.3	<15	<49	ND	110
S-2	12.16.22	C	0 to 5	<0.017	<0.033	<0.033	<0.066	ND	<3.3	<14	<46	ND	80
S-3	12.16.22	C	0 to 5	<0.016	<0.032	<0.032	<0.065	ND	<3.2	<14	<47	ND	<60
S-4	12.16.22	C	0 to 5	<0.018	<0.035	<0.035	<0.071	ND	<3.5	<14	<47	ND	100
S-6	12.20.22	C	3 to 6	<0.018	<0.037	<0.037	<0.074	ND	<3.7	<15	<50	ND	<60
S-7	12.20.22	C	5 to 8	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<13	<44	ND	<60

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

[1] = 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 Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

APPENDIX G

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 21, 2022

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Lateral 2B 24 OrderNo.: 2212A80

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/17/2022 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:00:00 AM
Lab ID: 2212A80-001 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	110	60		mg/Kg	20	12/19/2022 11:30:30 AM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 1:00:38 PM	72164
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 1:00:38 PM	72164
Surr: DNOP	113	21-129		%Rec	1	12/18/2022 1:00:38 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/18/2022 12:10:34 PM	A93375
Surr: BFB	84.3	37.7-212		%Rec	1	12/18/2022 12:10:34 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	12/18/2022 12:10:34 PM	C93375
Toluene	ND	0.033		mg/Kg	1	12/18/2022 12:10:34 PM	C93375
Ethylbenzene	ND	0.033		mg/Kg	1	12/18/2022 12:10:34 PM	C93375
Xylenes, Total	ND	0.067		mg/Kg	1	12/18/2022 12:10:34 PM	C93375
Surr: 4-Bromofluorobenzene	83.9	70-130		%Rec	1	12/18/2022 12:10:34 PM	C93375

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:05:00 AM
Lab ID: 2212A80-002 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	80	60		mg/Kg	20	12/19/2022 11:42:54 AM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 1:11:05 PM	72164
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/18/2022 1:11:05 PM	72164
Surr: DNOP	105	21-129		%Rec	1	12/18/2022 1:11:05 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/18/2022 12:33:50 PM	A93375
Surr: BFB	83.5	37.7-212		%Rec	1	12/18/2022 12:33:50 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	12/18/2022 12:33:50 PM	C93375
Toluene	ND	0.033		mg/Kg	1	12/18/2022 12:33:50 PM	C93375
Ethylbenzene	ND	0.033		mg/Kg	1	12/18/2022 12:33:50 PM	C93375
Xylenes, Total	ND	0.066		mg/Kg	1	12/18/2022 12:33:50 PM	C93375
Surr: 4-Bromofluorobenzene	83.2	70-130		%Rec	1	12/18/2022 12:33:50 PM	C93375

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:10:00 AM
Lab ID: 2212A80-003 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	ND	60		mg/Kg	20	12/19/2022 11:55:19 AM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 1:22:48 PM	72164
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2022 1:22:48 PM	72164
Surr: DNOP	106	21-129		%Rec	1	12/18/2022 1:22:48 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	12/18/2022 12:57:07 PM	A93375
Surr: BFB	85.1	37.7-212		%Rec	1	12/18/2022 12:57:07 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.016		mg/Kg	1	12/18/2022 12:57:07 PM	C93375
Toluene	ND	0.032		mg/Kg	1	12/18/2022 12:57:07 PM	C93375
Ethylbenzene	ND	0.032		mg/Kg	1	12/18/2022 12:57:07 PM	C93375
Xylenes, Total	ND	0.065		mg/Kg	1	12/18/2022 12:57:07 PM	C93375
Surr: 4-Bromofluorobenzene	83.2	70-130		%Rec	1	12/18/2022 12:57:07 PM	C93375

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:20:00 AM
Lab ID: 2212A80-004 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**NAI**
Chloride	100	60		mg/Kg	20	12/19/2022 12:07:44 PM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**DGH**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 1:33:17 PM	72164
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2022 1:33:17 PM	72164
Surr: DNOP	105	21-129		%Rec	1	12/18/2022 1:33:17 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/18/2022 1:20:20 PM	A93375
Surr: BFB	83.0	37.7-212		%Rec	1	12/18/2022 1:20:20 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.018		mg/Kg	1	12/18/2022 1:20:20 PM	C93375
Toluene	ND	0.035		mg/Kg	1	12/18/2022 1:20:20 PM	C93375
Ethylbenzene	ND	0.035		mg/Kg	1	12/18/2022 1:20:20 PM	C93375
Xylenes, Total	ND	0.071		mg/Kg	1	12/18/2022 1:20:20 PM	C93375
Surr: 4-Bromofluorobenzene	83.1	70-130		%Rec	1	12/18/2022 1:20:20 PM	C93375

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:25:00 AM
Lab ID: 2212A80-005 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	1200	60		mg/Kg	20	12/19/2022 12:44:58 PM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	150	14		mg/Kg	1	12/19/2022 3:32:00 PM	72164
Motor Oil Range Organics (MRO)	150	48		mg/Kg	1	12/19/2022 3:32:00 PM	72164
Surr: DNOP	122	21-129		%Rec	1	12/19/2022 3:32:00 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	21	18		mg/Kg	5	12/18/2022 1:43:36 PM	A93375
Surr: BFB	108	37.7-212		%Rec	5	12/18/2022 1:43:36 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.091		mg/Kg	5	12/18/2022 1:43:36 PM	C93375
Toluene	0.35	0.18		mg/Kg	5	12/18/2022 1:43:36 PM	C93375
Ethylbenzene	ND	0.18		mg/Kg	5	12/18/2022 1:43:36 PM	C93375
Xylenes, Total	1.8	0.36		mg/Kg	5	12/18/2022 1:43:36 PM	C93375
Surr: 4-Bromofluorobenzene	84.2	70-130		%Rec	5	12/18/2022 1:43:36 PM	C93375

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-1
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:30:00 AM
Lab ID: 2212A80-006 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	110	60		mg/Kg	20	12/19/2022 12:57:22 PM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 1:54:21 PM	72164
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 1:54:21 PM	72164
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 1:54:21 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/18/2022 2:06:55 PM	A93375
Surr: BFB	128	37.7-212		%Rec	1	12/18/2022 2:06:55 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	12/18/2022 2:06:55 PM	C93375
Toluene	ND	0.040		mg/Kg	1	12/18/2022 2:06:55 PM	C93375
Ethylbenzene	ND	0.040		mg/Kg	1	12/18/2022 2:06:55 PM	C93375
Xylenes, Total	ND	0.079		mg/Kg	1	12/18/2022 2:06:55 PM	C93375
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/18/2022 2:06:55 PM	C93375

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212A80**
Date Reported: **12/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-2
Project: Lateral 2B 24 **Collection Date:** 12/16/2022 10:35:00 AM
Lab ID: 2212A80-007 **Matrix:** MEOH (SOIL) **Received Date:** 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**NAI**
Chloride	ND	60		mg/Kg	20	12/19/2022 1:09:46 PM	72170
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 2:04:54 PM	72164
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 2:04:54 PM	72164
Surr: DNOP	114	21-129		%Rec	1	12/18/2022 2:04:54 PM	72164
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/18/2022 3:16:56 PM	A93375
Surr: BFB	86.0	37.7-212		%Rec	1	12/18/2022 3:16:56 PM	A93375
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.017		mg/Kg	1	12/18/2022 3:16:56 PM	C93375
Toluene	ND	0.035		mg/Kg	1	12/18/2022 3:16:56 PM	C93375
Ethylbenzene	ND	0.035		mg/Kg	1	12/18/2022 3:16:56 PM	C93375
Xylenes, Total	ND	0.070		mg/Kg	1	12/18/2022 3:16:56 PM	C93375
Surr: 4-Bromofluorobenzene	85.1	70-130		%Rec	1	12/18/2022 3:16:56 PM	C93375

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

Qualifiers:

*	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 Quanitative 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#: **2212A80**

21-Dec-22

Client: ENSOLUM

Project: Lateral 2B 24

Sample ID:	**MB-72170**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**72170**	RunNo:	**93390**					
Prep Date:	**12/19/2022**	Analysis Date:	**12/19/2022**	SeqNo:	**3369283**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID:	**LCS-72170**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**72170**	RunNo:	**93390**					
Prep Date:	**12/19/2022**	Analysis Date:	**12/19/2022**	SeqNo:	**3369284**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	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 Quanitative 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#: **2212A80**

21-Dec-22

Client: ENSOLUM

Project: Lateral 2B 24

Sample ID: **LCS-72164**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **72164**	RunNo: **93383**
Prep Date: **12/18/2022**	Analysis Date: **12/18/2022**	SeqNo: **3367600** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	50.00	0	82.0	64.4	127			
Surr: DNOP	5.2		5.000		104	21	129			

Sample ID: **MB-72164**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **72164**	RunNo: **93383**
Prep Date: **12/18/2022**	Analysis Date: **12/18/2022**	SeqNo: **3367602** Units: **mg/Kg**

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	9.7		10.00		97.3	21	129			

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 Quanitative 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#: **2212A80**

21-Dec-22

Client: ENSOLUM

Project: Lateral 2B 24

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **A93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367045** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		89.8	37.7	212			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367046** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	72.3	137			
Surr: BFB	1900		1000		185	37.7	212			

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 Quanitative 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#: **2212A80**

21-Dec-22

Client: ENSOLUM

Project: Lateral 2B 24

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **C93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367082** Units: **mg/Kg**

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	0.90		1.000		90.0	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **C93375**	RunNo: **93375**
Prep Date:	Analysis Date: **12/18/2022**	SeqNo: **3367083** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.5	80	120			
Toluene	0.94	0.050	1.000	0	94.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.6	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.6	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		86.9	70	130			

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 Quanitative 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

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: 2212A80 RcptNo: 1

Received By: Desiree Dominguez 12/17/2022 10:00:00 AM DD

Completed By: Desiree Dominguez 12/17/2022 10:37:47 AM DD

Reviewed By: CM 12/19/22

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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
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? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: DAD 12/17/22

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	0.7	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande, Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolumcom

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 100% Same Day

Project Name: Lateral 2B-24

Project #: See Notes

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 0.8-0.1=0.7 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212A80	BTEX / ~~MTBE / TMB's~~ (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_3, NO_2, PO_4, SO_4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/16/22	10:00	S	S-1	1402 jar	Cool	-001	X	X					X			
12/16/22	10:05	S	S-2			-002	X	X					X			
12/16/22	10:10	S	S-3			-003	X	X					X			
12/16/22	10:20	S	S-4			-004	X	X					X			
12/16/22	10:25	S	S-5			-005	X	X					X			
12/16/22	10:30	S	SP-1			-006	X	X					X			
12/16/22	10:35	S	SP-2			-007	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/16/22	1452					
12/16/22	1804			courier	12/17/22	10:00

Remarks: PM Tom Long
Pay Key: RB21200
Non AFE # N61880

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 30, 2022

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral 2B-24 Dec 2022 OrderNo.: 2212B98

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/21/2022 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2212B98**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-6
Project: Lateral 2B-24 Dec 2022 **Collection Date:** 12/20/2022 2:35:00 PM
Lab ID: 2212B98-001 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/21/2022 11:21:07 AM	72246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/21/2022 12:18:42 PM	72244
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/21/2022 12:18:42 PM	72244
Surr: DNOP	120	21-129		%Rec	1	12/21/2022 12:18:42 PM	72244
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/21/2022 9:38:32 AM	A93454
Surr: BFB	86.4	37.7-212		%Rec	1	12/21/2022 9:38:32 AM	A93454
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/21/2022 9:38:32 AM	C93454
Toluene	ND	0.037		mg/Kg	1	12/21/2022 9:38:32 AM	C93454
Ethylbenzene	ND	0.037		mg/Kg	1	12/21/2022 9:38:32 AM	C93454
Xylenes, Total	ND	0.074		mg/Kg	1	12/21/2022 9:38:32 AM	C93454
Surr: 4-Bromofluorobenzene	85.2	70-130		%Rec	1	12/21/2022 9:38:32 AM	C93454

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212B98**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Lateral 2B-24 Dec 2022 **Collection Date:** 12/20/2022 2:40:00 PM
Lab ID: 2212B98-002 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/21/2022 11:33:32 AM	72246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/21/2022 12:29:13 PM	72244
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/21/2022 12:29:13 PM	72244
Surr: DNOP	112	21-129		%Rec	1	12/21/2022 12:29:13 PM	72244
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	12/21/2022 10:02:03 AM	A93454
Surr: BFB	88.8	37.7-212		%Rec	1	12/21/2022 10:02:03 AM	A93454
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	12/21/2022 10:02:03 AM	C93454
Toluene	ND	0.038		mg/Kg	1	12/21/2022 10:02:03 AM	C93454
Ethylbenzene	ND	0.038		mg/Kg	1	12/21/2022 10:02:03 AM	C93454
Xylenes, Total	ND	0.076		mg/Kg	1	12/21/2022 10:02:03 AM	C93454
Surr: 4-Bromofluorobenzene	88.1	70-130		%Rec	1	12/21/2022 10:02:03 AM	C93454

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

Qualifiers:

*	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2212B98**
Date Reported: **12/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** FP-1
Project: Lateral 2B-24 Dec 2022 **Collection Date:** 12/20/2022 2:45:00 PM
Lab ID: 2212B98-003 **Matrix:** MEOH (SOIL) **Received Date:** 12/21/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1200	60		mg/Kg	20	12/21/2022 11:45:57 AM	72246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	6600	150		mg/Kg	10	12/28/2022 10:03:04 PM	72244
Motor Oil Range Organics (MRO)	ND	490	D	mg/Kg	10	12/28/2022 10:03:04 PM	72244
Surr: DNOP	0	21-129	S	%Rec	10	12/28/2022 10:03:04 PM	72244
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	12/21/2022 10:25:33 AM	A93454
Surr: BFB	83.3	37.7-212		%Rec	1	12/21/2022 10:25:33 AM	A93454
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	12/21/2022 10:25:33 AM	C93454
Toluene	ND	0.034		mg/Kg	1	12/21/2022 10:25:33 AM	C93454
Ethylbenzene	ND	0.034		mg/Kg	1	12/21/2022 10:25:33 AM	C93454
Xylenes, Total	ND	0.068		mg/Kg	1	12/21/2022 10:25:33 AM	C93454
Surr: 4-Bromofluorobenzene	83.4	70-130		%Rec	1	12/21/2022 10:25:33 AM	C93454

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

Qualifiers:

*	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 Quanitative 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#: **2212B98**

30-Dec-22

Client: ENSOLUM

Project: Lateral 2B-24 Dec 2022

Sample ID: **MB-72246** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **72246** RunNo: **93460**

Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3372167** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-72246** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **72246** RunNo: **93460**

Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3372168** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	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 Quanitative 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#: **2212B98**
30-Dec-22

Client: ENSOLUM
Project: Lateral 2B-24 Dec 2022

Sample ID: **2212B98-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-6** Batch ID: **72244** RunNo: **93461**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3370978** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	13	43.52	0	144	36.1	154			
Surr: DNOP	5.4		4.352		125	21	129			

Sample ID: **2212B98-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-6** Batch ID: **72244** RunNo: **93461**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3370979** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	12	41.46	0	104	36.1	154	36.5	33.9	R
Surr: DNOP	4.8		4.146		116	21	129	0	0	

Sample ID: **LCS-72244** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72244** RunNo: **93461**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3370984** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	87.2	64.4	127			
Surr: DNOP	5.9		5.000		118	21	129			

Sample ID: **MB-72244** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72244** RunNo: **93461**
Prep Date: **12/21/2022** Analysis Date: **12/21/2022** SeqNo: **3370986** Units: **mg/Kg**

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	12		10.00		116	21	129			

Sample ID: **MB-72256** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72256** RunNo: **93500**
Prep Date: **12/21/2022** Analysis Date: **12/22/2022** SeqNo: **3372932** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		118	21	129			

Sample ID: **LCS-72256** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72256** RunNo: **93500**
Prep Date: **12/21/2022** Analysis Date: **12/22/2022** SeqNo: **3374250** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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 Quanitative 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#: **2212B98**

30-Dec-22

Client: ENSOLUM

Project: Lateral 2B-24 Dec 2022

Sample ID: **LCS-72256** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72256** RunNo: **93500**
Prep Date: **12/21/2022** Analysis Date: **12/22/2022** SeqNo: **3374250** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.8		5.000		136	21	129			S

Sample ID: **LCS-72271** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72271** RunNo: **93500**
Prep Date: **12/22/2022** Analysis Date: **12/22/2022** SeqNo: **3374252** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		117	21	129			

Sample ID: **MB-72271** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72271** RunNo: **93500**
Prep Date: **12/22/2022** Analysis Date: **12/22/2022** SeqNo: **3374254** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		111	21	129			

Sample ID: **LCS-72338** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **72338** RunNo: **93583**
Prep Date: **12/28/2022** Analysis Date: **12/28/2022** SeqNo: **3376644** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.9	21	129			

Sample ID: **MB-72338** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **72338** RunNo: **93583**
Prep Date: **12/28/2022** Analysis Date: **12/28/2022** SeqNo: **3376646** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.6		10.00		86.4	21	129			

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 Quanitative 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#: **2212B98**

30-Dec-22

Client: ENSOLUM

Project: Lateral 2B-24 Dec 2022

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **A93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371088** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.8	37.7	212			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371089** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.5	72.3	137			
Surr: BFB	1800		1000		178	37.7	212			

Sample ID: **mb-II**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **B93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371107** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		88.2	37.7	212			

Sample ID: **2.5ug gro lcs-II**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **B93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371108** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1800		1000		182	37.7	212			

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 Quanitative 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#: **2212B98**

30-Dec-22

Client: ENSOLUM

Project: Lateral 2B-24 Dec 2022

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **C93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371152** Units: **mg/Kg**

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	0.88		1.000		88.2	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **C93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371153** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.1	80	120			
Toluene	0.91	0.050	1.000	0	91.5	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.8	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.5	70	130			

Sample ID: **mb-II**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **D93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371171** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.87		1.000		86.8	70	130			

Sample ID: **100ng btex lcs-II**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **D93454**	RunNo: **93454**
Prep Date:	Analysis Date: **12/21/2022**	SeqNo: **3371172** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.87		1.000		87.0	70	130			

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 Quanitative 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

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: 2212B98 RcptNo: 1

Received By: Tracy Casarrubias 12/21/2022 6:30:00 AM

Completed By: Tracy Casarrubias 12/21/2022 7:58:04 AM

Reviewed By: JA 12-21-22

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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
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? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: JN 12/21/22

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	1.3	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande Suite A

Aztec, NM 87410

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: SAME DAY

☐ Standard ☒ Rush 100%

Project Name: Lateral 2B-24 (Dec2022)

Project #: See notes

Project Manager: ksummers

Sampler: RDeechilly

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 1.3-0=1.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212B90	BTEX / ~~MTBE / TMB's~~ (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_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chloride
12/20/22	1435	S	S-6	(1) 4oz Jar	Cool	001	X	X									X
12/20/22	1440	S	S-7	(1) 4oz Jar	Cool	002	X	X									X
12/20/22	1445	S	FP-1	(1) 4oz Jar	Cool	003	X	X									X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/20/22	1605				12/20/22	1605
12/20/22	1750			courier	12/21/22	6:30

Remarks: SAME DAY

PM-Tom Long (EPROD)
Paykey- RB21200
NonAFE- N61880

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 13, 2023

Kyle Summers

ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Lateral 2B 24 Dec 2022 OrderNo.: 2301375

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/11/2023 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 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2301375**
Date Reported: **1/13/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** FP-2
Project: Lateral 2B 24 Dec 2022 **Collection Date:** 1/10/2023 9:45:00 AM
Lab ID: 2301375-001 **Matrix:** MEOH (SOIL) **Received Date:** 1/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	59		mg/Kg	20	1/11/2023 12:08:59 PM	72570
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/11/2023 10:41:59 AM	72567
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/11/2023 10:41:59 AM	72567
Surr: DNOP	112	21-129		%Rec	1	1/11/2023 10:41:59 AM	72567
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JR**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	1/11/2023 11:47:00 AM	R93873
Surr: BFB	103	37.7-212		%Rec	1	1/11/2023 11:47:00 AM	R93873
EPA METHOD 8021B: VOLATILES						Analyst: **JR**	
Benzene	ND	0.017		mg/Kg	1	1/11/2023 11:47:00 AM	B93873
Toluene	ND	0.034		mg/Kg	1	1/11/2023 11:47:00 AM	B93873
Ethylbenzene	ND	0.034		mg/Kg	1	1/11/2023 11:47:00 AM	B93873
Xylenes, Total	ND	0.069		mg/Kg	1	1/11/2023 11:47:00 AM	B93873
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	1/11/2023 11:47:00 AM	B93873

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

Qualifiers:

*	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 Quanitative 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#: **2301375**

13-Jan-23

Client: ENSOLUM

Project: Lateral 2B 24 Dec 2022

Sample ID: **MB-72570**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **72570**	RunNo: **93870**								
Prep Date: **1/11/2023**	Analysis Date: **1/11/2023**	SeqNo: **3389810**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-72570**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **72570**	RunNo: **93870**								
Prep Date: **1/11/2023**	Analysis Date: **1/11/2023**	SeqNo: **3389812**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	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 Quanitative 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#: **2301375**

13-Jan-23

Client: ENSOLUM

Project: Lateral 2B 24 Dec 2022

Sample ID: **2301375-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **FP-2** Batch ID: **72567** RunNo: **93869**

Prep Date: **1/11/2023** Analysis Date: **1/11/2023** SeqNo: **3388575** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.2	46.08	0	95.9	36.1	154			
Surr: DNOP	5.3		4.608		116	21	129			

Sample ID: **2301375-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **FP-2** Batch ID: **72567** RunNo: **93869**

Prep Date: **1/11/2023** Analysis Date: **1/11/2023** SeqNo: **3388576** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.8	49.02	0	96.3	36.1	154	6.61	33.9	
Surr: DNOP	5.6		4.902		115	21	129	0	0	

Sample ID: **LCS-72567** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **72567** RunNo: **93869**

Prep Date: **1/11/2023** Analysis Date: **1/11/2023** SeqNo: **3388579** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.5	64.4	127			
Surr: DNOP	5.4		5.000		108	21	129			

Sample ID: **MB-72567** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **72567** RunNo: **93869**

Prep Date: **1/11/2023** Analysis Date: **1/11/2023** SeqNo: **3388582** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	21	129			

Qualifiers:

*	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 Quanitative 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#: **2301375**

13-Jan-23

Client: ENSOLUM

Project: Lateral 2B 24 Dec 2022

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389572** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.9	72.3	137			
Surr: BFB	2200		1000		225	37.7	212			S

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389573** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		106	37.7	212			

Sample ID: **2301375-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **FP-2**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389580** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	70	130			
Surr: BFB	2300		1000		226	37.7	212			S

Sample ID: **2301375-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **FP-2**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389581** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.2	70	130	6.09	20	
Surr: BFB	2100		1000		210	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 Quanitative 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#: **2301375**

13-Jan-23

Client: ENSOLUM

Project: Lateral 2B 24 Dec 2022

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389625** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		123	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389626** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		123	70	130			

Sample ID: **2301375-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **FP-2**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389633** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		119	70	130			

Sample ID: **2301375-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **FP-2**	Batch ID: **R93873**	RunNo: **93873**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389634** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		116	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 Quanitative 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

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: 2301375 | RcptNo: 1

Received By: Tracy Casarrubias 1/11/2023 7:20:00 AM

Completed By: Tracy Casarrubias 1/11/2023 7:45:47 AM

Reviewed By: CMC 1/11/23

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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
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? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: JM 1/11/23

Special Handling (if applicable)

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

Person Notified:	K Summers
Date:	1/11/2023
By Whom:	Tracy Casarrubias
Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Incomplete COC
Client Instructions:	Phone number missing on COC. Sent email to Summers to have a valid one added - TM

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: ~~Enter~~ LD Ensolum, LLC

Mailing Address: 606 S. Rio Grande, Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 100% Day Same

Project Name: Lateral 2B-24 (Dec. 2022)

Project #: LD 05A1226219-24

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp(Including CF): 1.6 -0 = 1.6 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2301375	BTEX / ~~MTBE / TMB's~~ (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_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/10/23	9:45	S	FP-2	14oz jar	Cool	001	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/10/23	1305				1/10/23	1305
1/10/23	1746			Courier	1/11/23	7:20

Remarks:
PM Tom Long
Paykey: RB21200
Non AFE# N61880

Same Day

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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 219434

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 219434
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/23/2023