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: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	**Incident #** *(assigned by OCD)*: **NCS2003751715**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.550869** Longitude **-107.746550** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Huerfanito #82M Pipeline**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **01/06/2020**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
D	**25**	**27N**	**9W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☒ Tribal ☐ Private (*Name*: **Navajo Nation**)

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): **3-5 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **5.5 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release On January 6, 2020, Enterprise discovered a release of natural gas on the Huerfanito #82M pipeline. No liquids were released to the ground surface. The pipeline was blown down, depressurized, locked out and tagged out. No washes were affected. Repairs and remediation were initiated on January 15, 2020, at which time Enterprise determined the release reportable per NMOCD regulation due to the volume of impacted subsurface soil. Remediation was completed on January 15, 2020. The final excavation dimensions measured approximately 12 feet long by 6 feet wide by approximately 5 feet deep. Approximately 13 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

State of New Mexico
Oil Conservation Division

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: Jon E. Fields Title: Director, Environmental

Signature: Jon E. Fields Date: 10/28/2020

email: jefields@eprod.com Telephone: (713) 381-6684

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: 05/16/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Huerfanito #82M Pipeline Release
NW ¼, S25 T27N R9W
San Juan County, New Mexico

September 14, 2020
Ensolum Project No. 05A1226086

Prepared for:

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

Prepared by:

Chad D'Aponti
Environmental Scientist

Kyle Summers, CPG
Sr. Project Manager

Table of Contents

LIST OF APPENDICES

ENSOLUM

CLOSURE REPORT

Huerfanito #82M Pipeline Release
NW ¼, S25 T27N R9W
San Juan County, New Mexico

Ensolum Project No. 05A1226086

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Huerfanito #82M Pipeline Release (Site)
Location:	36.550869° North, 107.746550° West Northwest (NW) ¼ of Section 25, Township 27 North, Range 9 West San Juan County, New Mexico
Property:	Navajo Nation
Regulatory:	Navajo Nation Environmental Protection Agency (NNEPA) and New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On January 6, 2020, a release of natural gas was identified on the Huerfanito #82M pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On January 15, 2020, Enterprise initiated activities to facilitate the repair of the pipeline and remediate potential petroleum hydrocarbon impact resulting from the release.

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 New Mexico EMNRD OCD closure criteria.

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the NNEPA and the New Mexico EMNRD OCD. Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action, during the evaluation and remediation of the Site. Ensolum utilized the general site characteristics and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD imaging database to determine the appropriate closure criteria for the Site. Supporting documentation and figures associated with the following bullets are provided in **Appendix B**.

- The 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 were identified within a one-mile radius of the Site in the OSE WRRS database. In addition, no PODs were identified in adjacent Sections

- Two (2) cathodic protection wells were identified within a mile of the Site. The cathodic protection well associated with the Huerfanito Unit #79M oil/gas production well (Unit I, Sec 236 T27N R9W), located approximately 0.6 miles southwest of the Site and at a higher elevation (6,236 feet) than the Site (6,131 feet), indicates a depth to water of approximately 102 feet below grade surface (bgs). The cathodic protection well associated with the Huerfanito Units #172 and #56-23 oil/gas production wells (Unit B, Sec 23 T27N R9W), located approximately 1 mile northwest of the Site and at a slightly lower elevation (6,124 feet) than the Site, indicates a depth to water of approximately 130 feet below grade surface (bgs).

- The Site is located within 300 feet of a New Mexico EMNRD OCD-defined continuously flowing watercourse or significant watercourse. An ephemeral wash is located approximately 183 feet south of the excavation.

- 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. The nearest permanent residences are located approximately 855 feet (northeast) and 945 feet (southeast) from the Site.

- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.

- According to the OSE WRRS database there are no fresh water wells or springs within 1,000 feet of the Site. However, the residences located approximately 855 feet (northeast) and 945 feet (southeast) from the Site may have unregistered water wells.

- 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 located within 300 feet of a wetland.

- Based on information identified in the New Mexico Mining and Minerals Division's Geographic Information System (GIS), Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.

- The Site is not located within an unstable area.

- Based on information identified in the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not located within a 100-year floodplain.

Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include:

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

3.0 SOIL REMEDIATION ACTIVITIES

On January 15, 2020, Enterprise initiated activities to facilitate the repair of the pipeline and remediate petroleum hydrocarbon impact. During the remediation and corrective action activities, Kelley Oilfield services, Inc. provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 12 feet long and six (6) feet wide at the maximum extents. The maximum depth of the excavation measured approximately five (5) feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated silty sand.

A total of approximately 13 cubic yards (yd^3) of petroleum hydrocarbon affected soils and 55 barrels (bbls) of hydro-excavation soil cuttings were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation, the executed C-138 solid waste acceptance form is provided in **Appendix C**. The remaining 33 yd^3 of soils identified on the C-138 represent unaffected soils that were removed after the remediation activities to accommodate pipeline repairs. The excavation was backfilled with imported fill and was then contoured to the surrounding grade.

The map in **Figure 3** (**Appendix A**) 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 five (5) composite soil samples (S-1 through S-5), comprised of five (5) aliquots each, from the excavation for laboratory analysis. A clean shovel was utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence related to sampling is provided in **Appendix G**.

On January 15, 2020, the first sampling event was performed at the Site. Composite soil sample S-1 (5') was collected from the floor of the excavation. Composite soil samples S-2 (0'- 5'), S-3 (0'-5'), S-4 (0'-5'), and S-5 (0'-5') were collected from the sidewalls of the excavation.

The soil samples were collected and placed in laboratory prepared glassware, labeled, and sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were

relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0.

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

6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory supplied practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1 through S-5) to the applicable New Mexico EMNRD OCD closure criteria.

- The laboratory analytical result for composite soil sample S-1 indicates a benzene concentration of 0.017 milligrams per kilogram (mg/kg), which does not exceed the applicable New Mexico EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for the remaining composite soil samples indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analytical results for composite soil samples S-1 and S-4 indicate combined BTEX concentrations of 0.36 mg/kg and 0.087 mg/kg, respectively, which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for the remaining composite soil samples indicate total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for the composite soil samples indicate combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for composite soil samples S-1 and S-3 indicate chloride concentrations of 67 mg/kg and 100 mg/kg, respectively, which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for the remaining composite soil samples indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

The laboratory analytical results are summarized in **Table 1** (**Appendix E**).

7.0 RECLAMATION AND REVEGETATION

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

8.0 FINDINGS AND RECOMMENDATION

- A total of five (5) composite soil samples were collected from the excavation. Based on laboratory analytical results, the soils remaining in place at the Site do not exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria.

- A total of approximately 46 cubic yards (yd^3) of soils and 55 barrels (bbls) of hydro-excavation soil cuttings were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and contoured to the surrounding grade.

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.

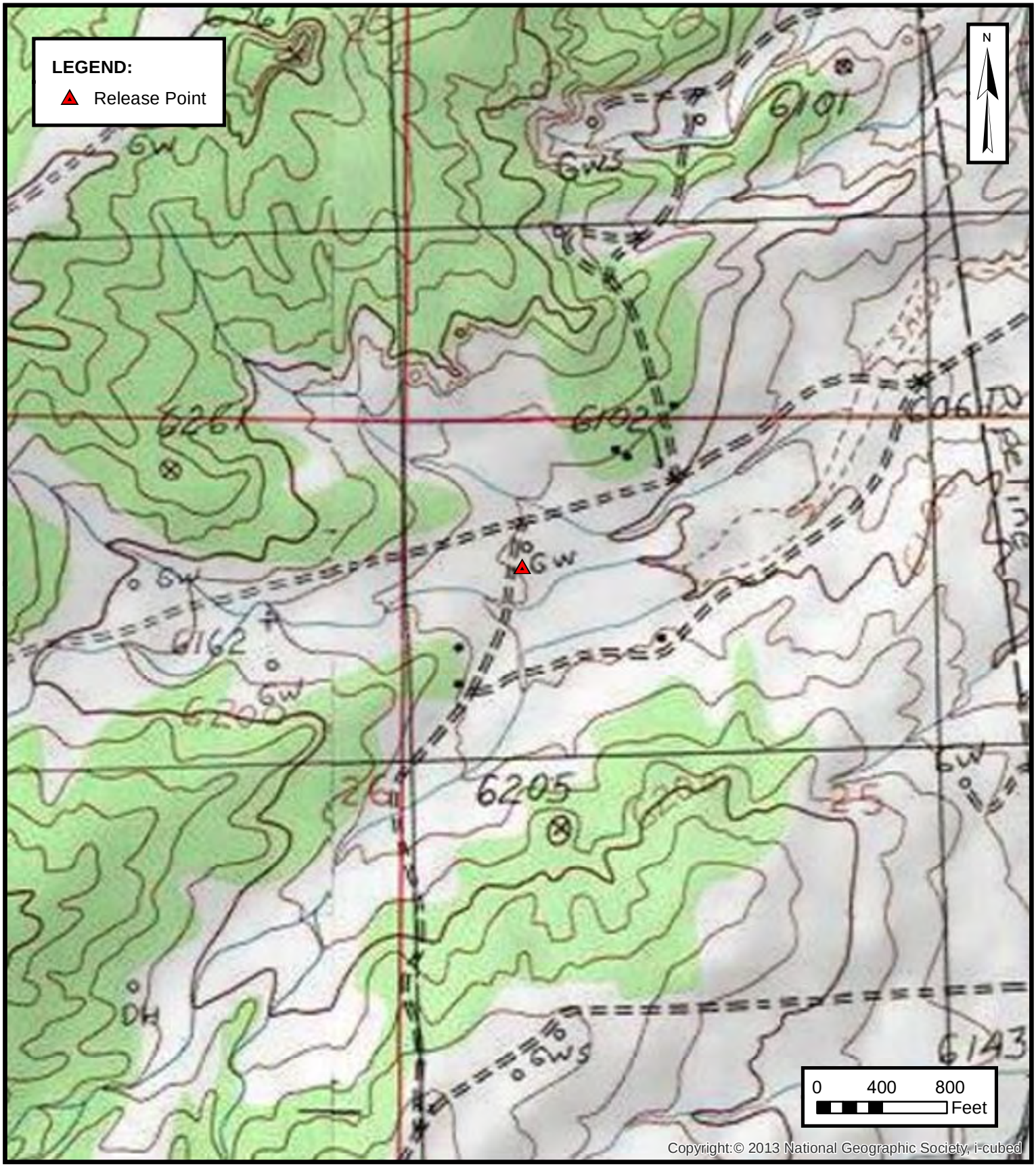
9.3 Reliance

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 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



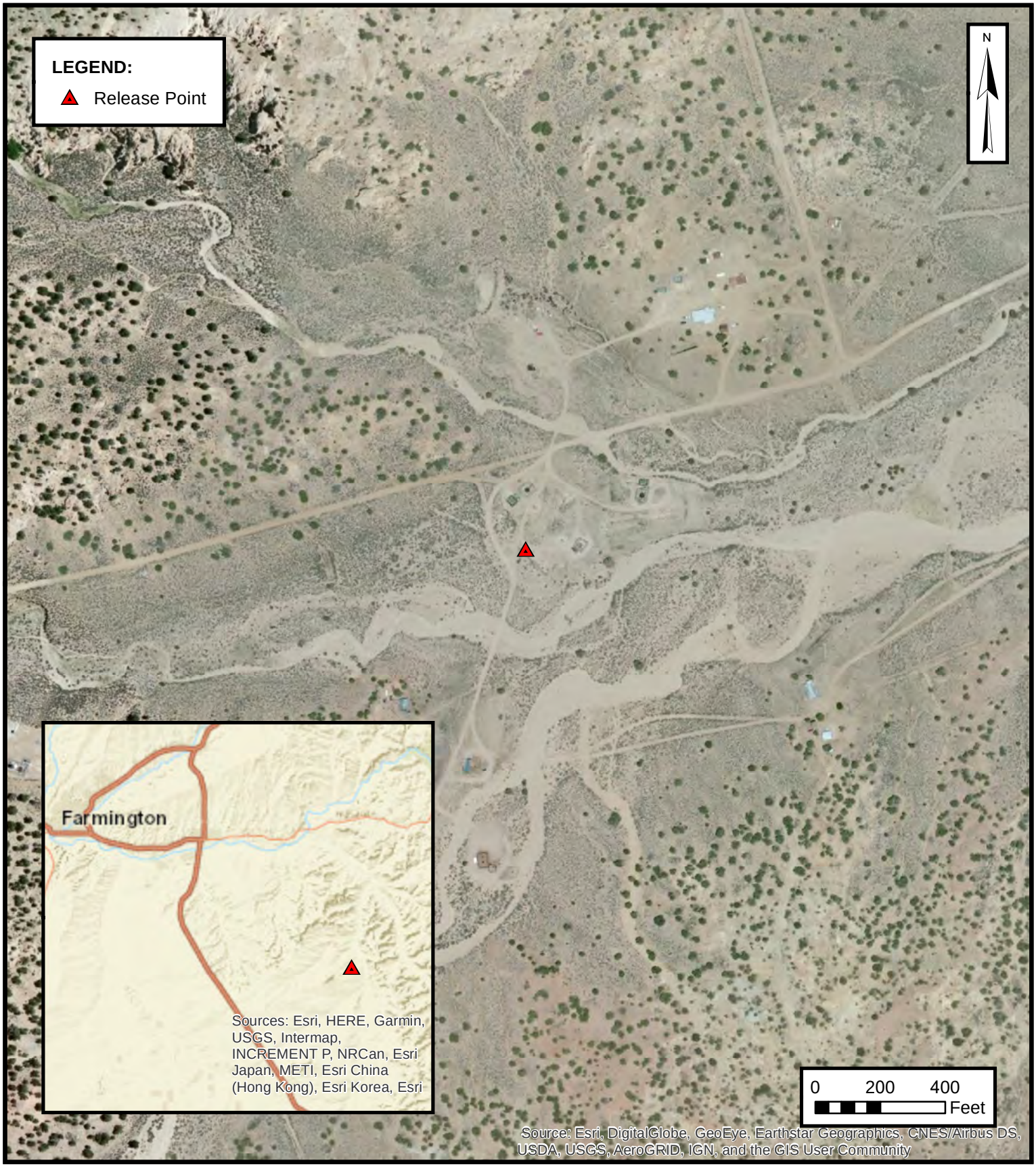
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE
1



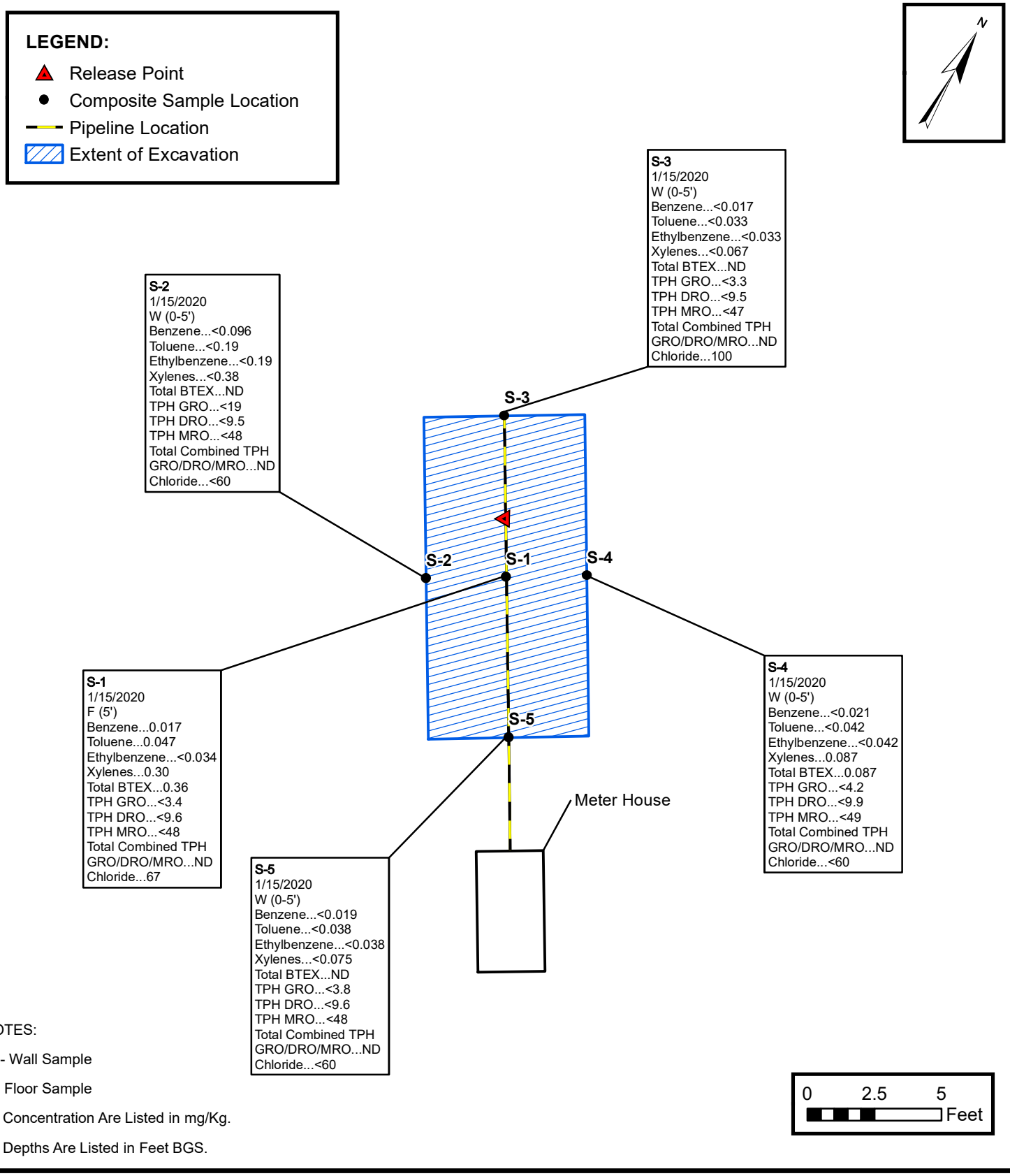
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE
2



NOTES:

W - Wall Sample

F - Floor Sample

All Concentration Are Listed in mg/Kg.

All Depths Are Listed in Feet BGS.

ENSOLUM
Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

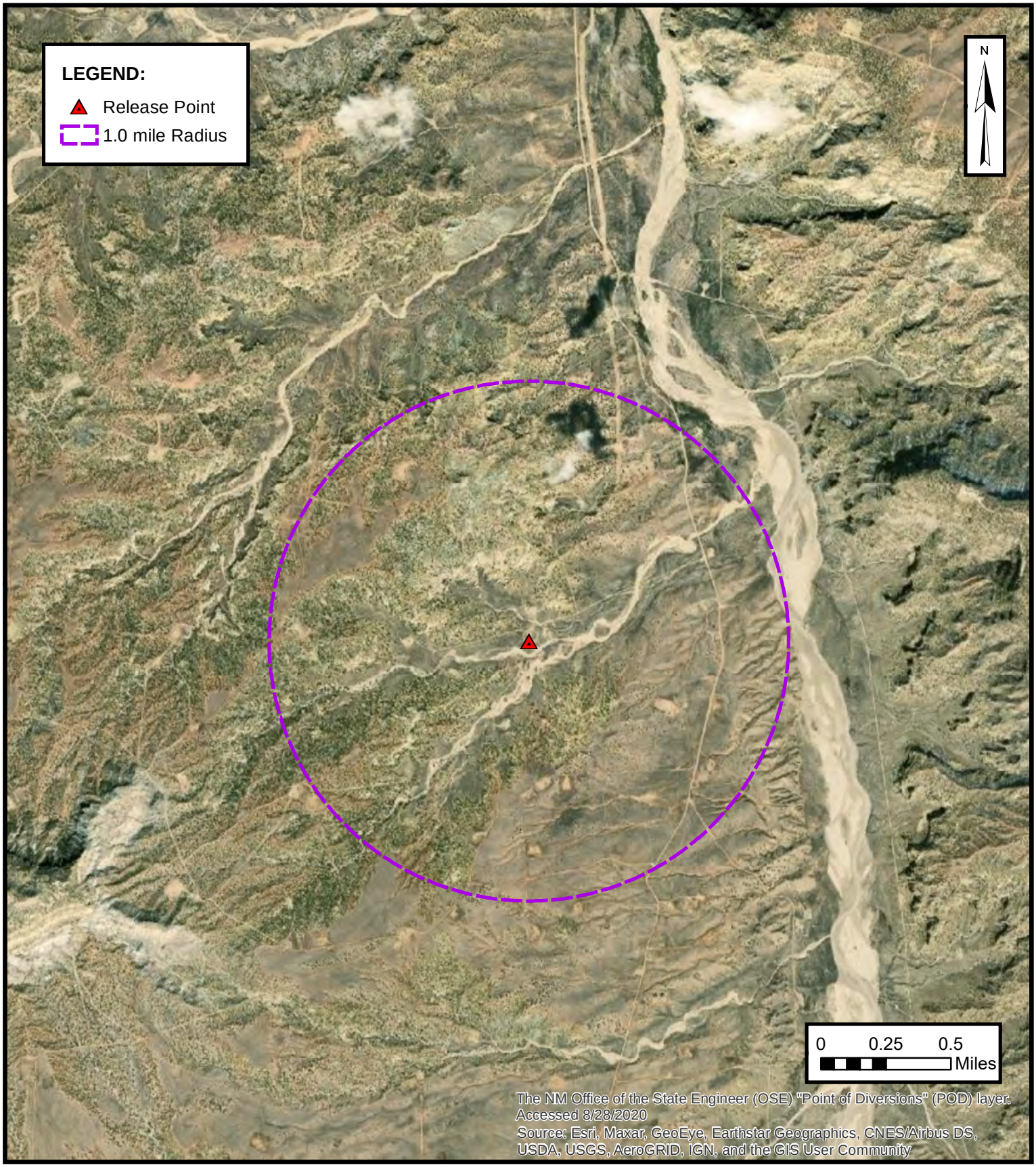
PROJECT NUMBER: 05A1226086

FIGURE
3

ENSOLUM

APPENDIX B

Siting Figures and Documentation



ENSOLUM
Environmental & Hydrogeologic Consultants

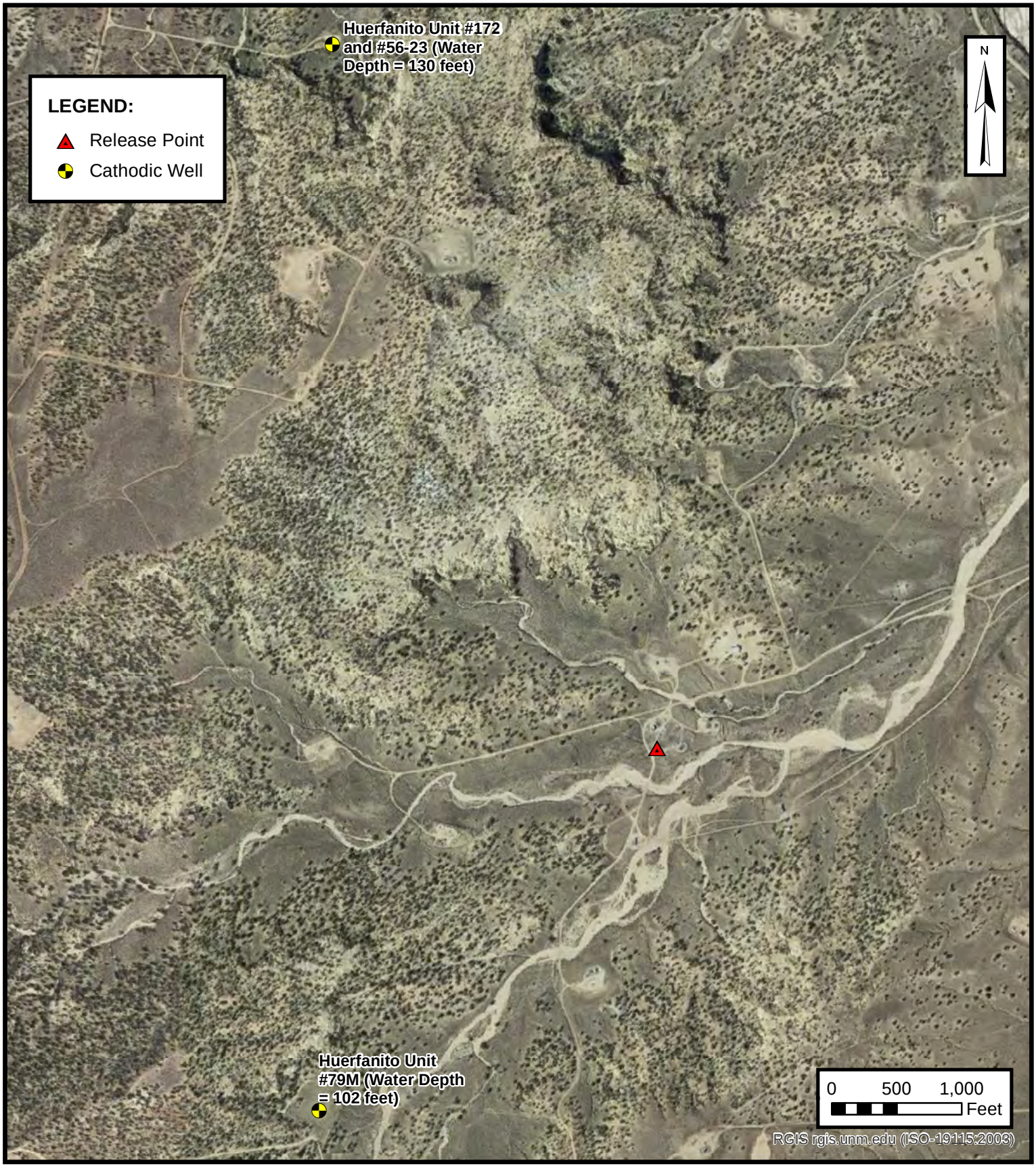
ONE MILE RADIUS WATER WELL MAP

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE

A



ENSOLUM
Environmental & Hydrogeologic Consultants

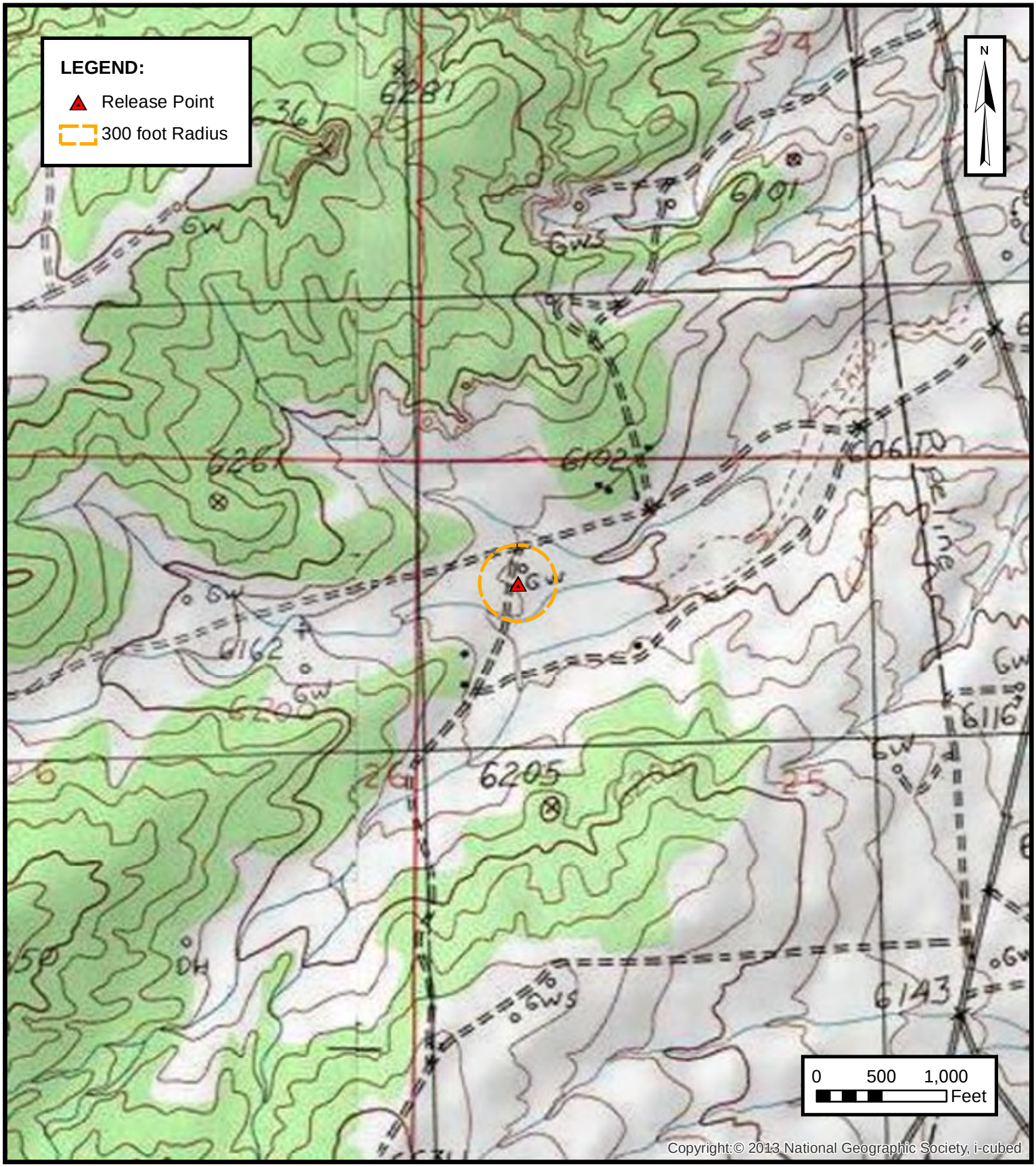
CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE

B

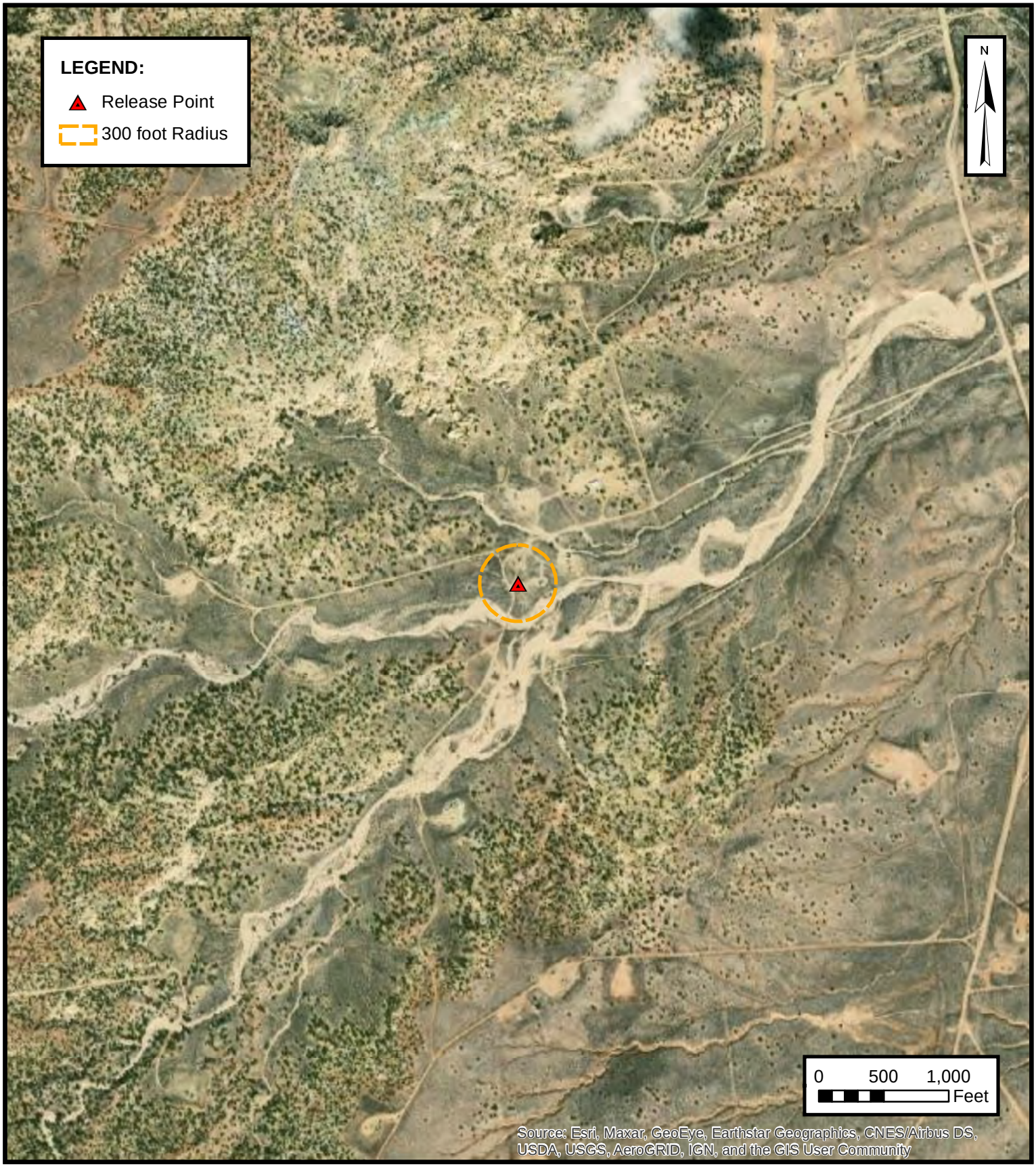


ENSOLUM
Environmental & Hydrogeologic Consultants

300-FOOT RADIUS
WATERCOURSE AND DRAINAGE IDENTIFICATION
ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE
C



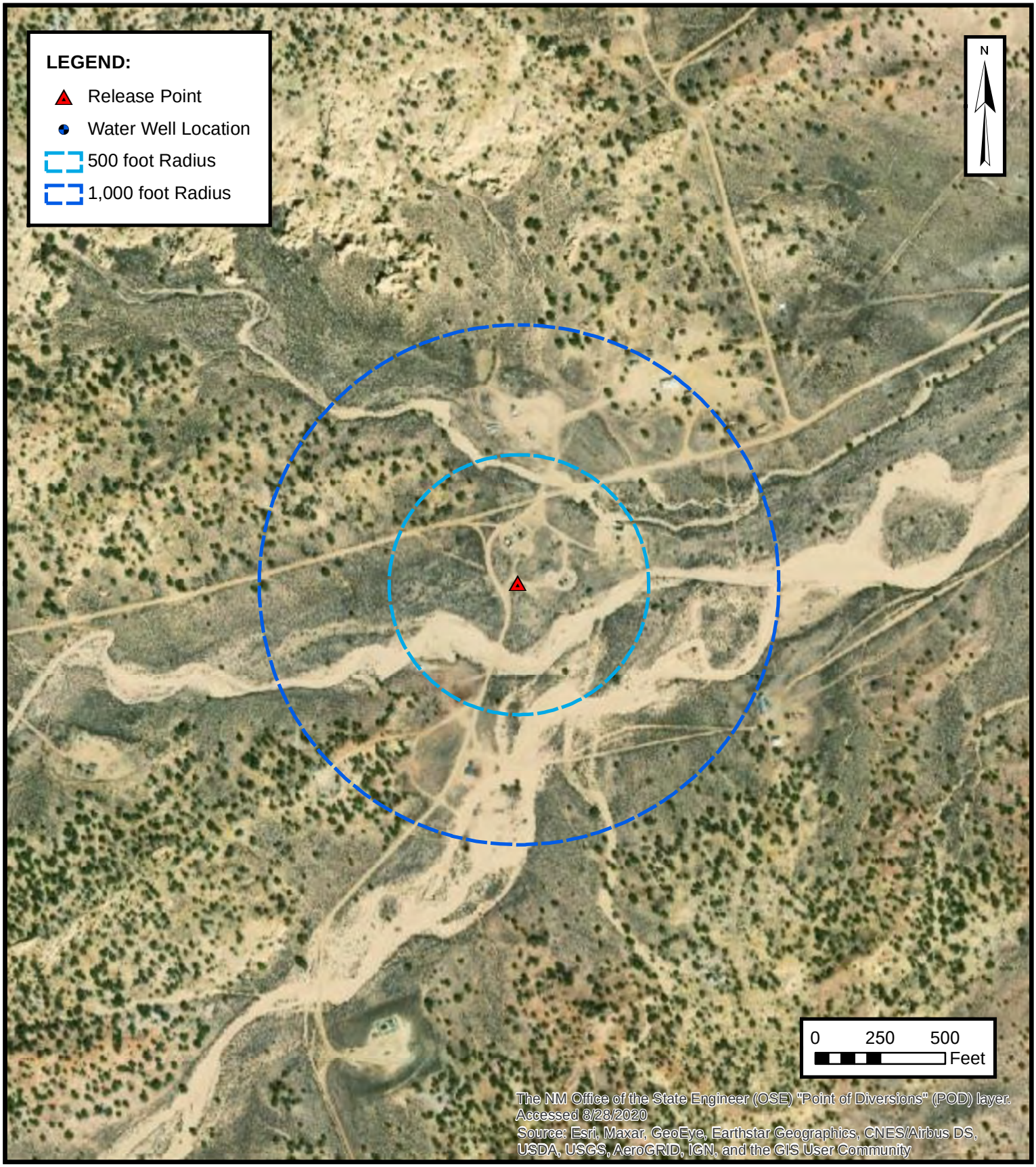
ENSOLUM
Environmental & Hydrogeologic Consultants

300-FOOT RADIUS
OCCUPIED STRUCTURE IDENTIFICATION

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE
D



ENSOLUM
Environmental & Hydrogeologic Consultants

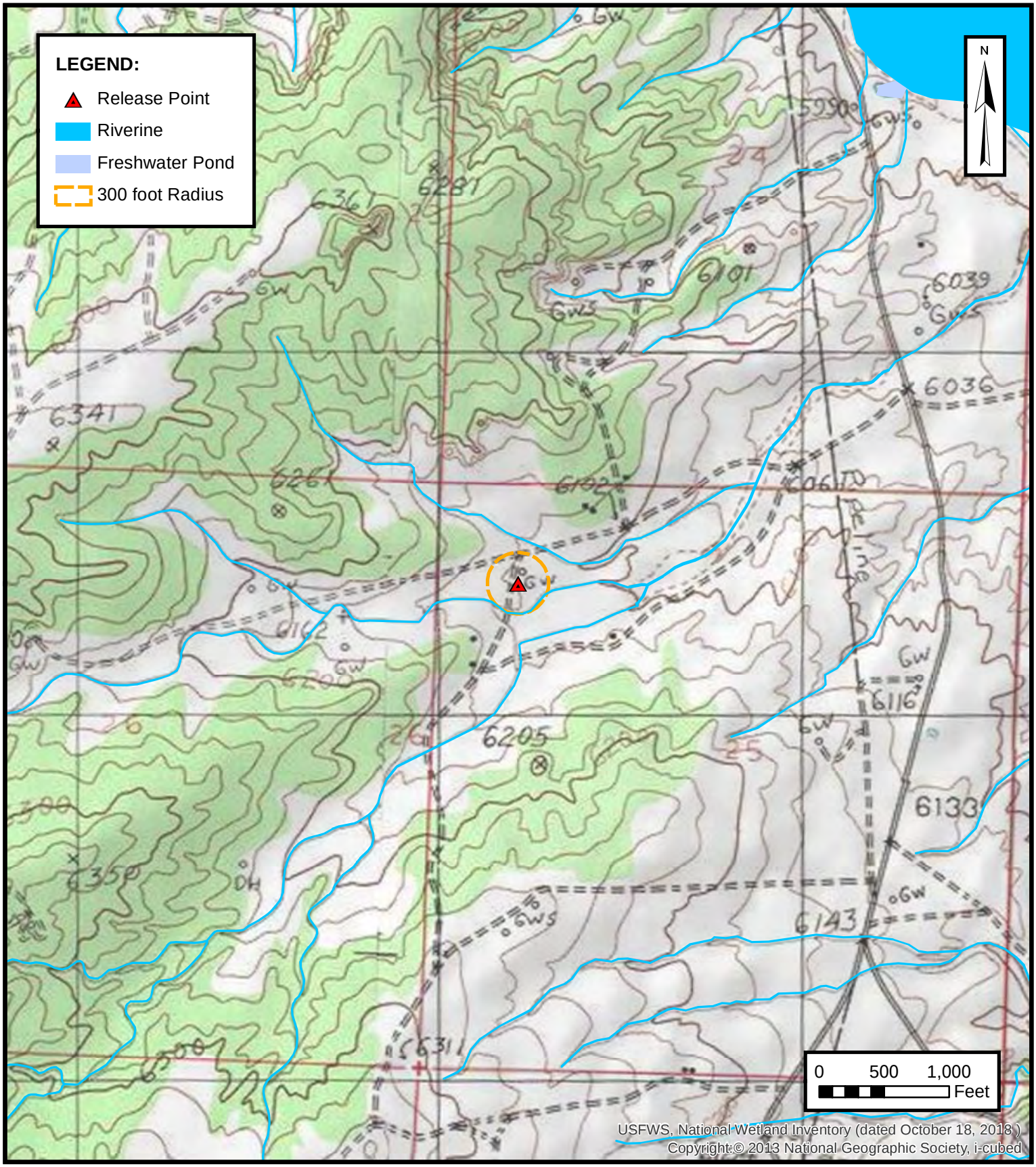
WATER WELL AND NATURAL SPRING LOCATION

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE

E



ENSOLUM
Environmental & Hydrogeologic Consultants

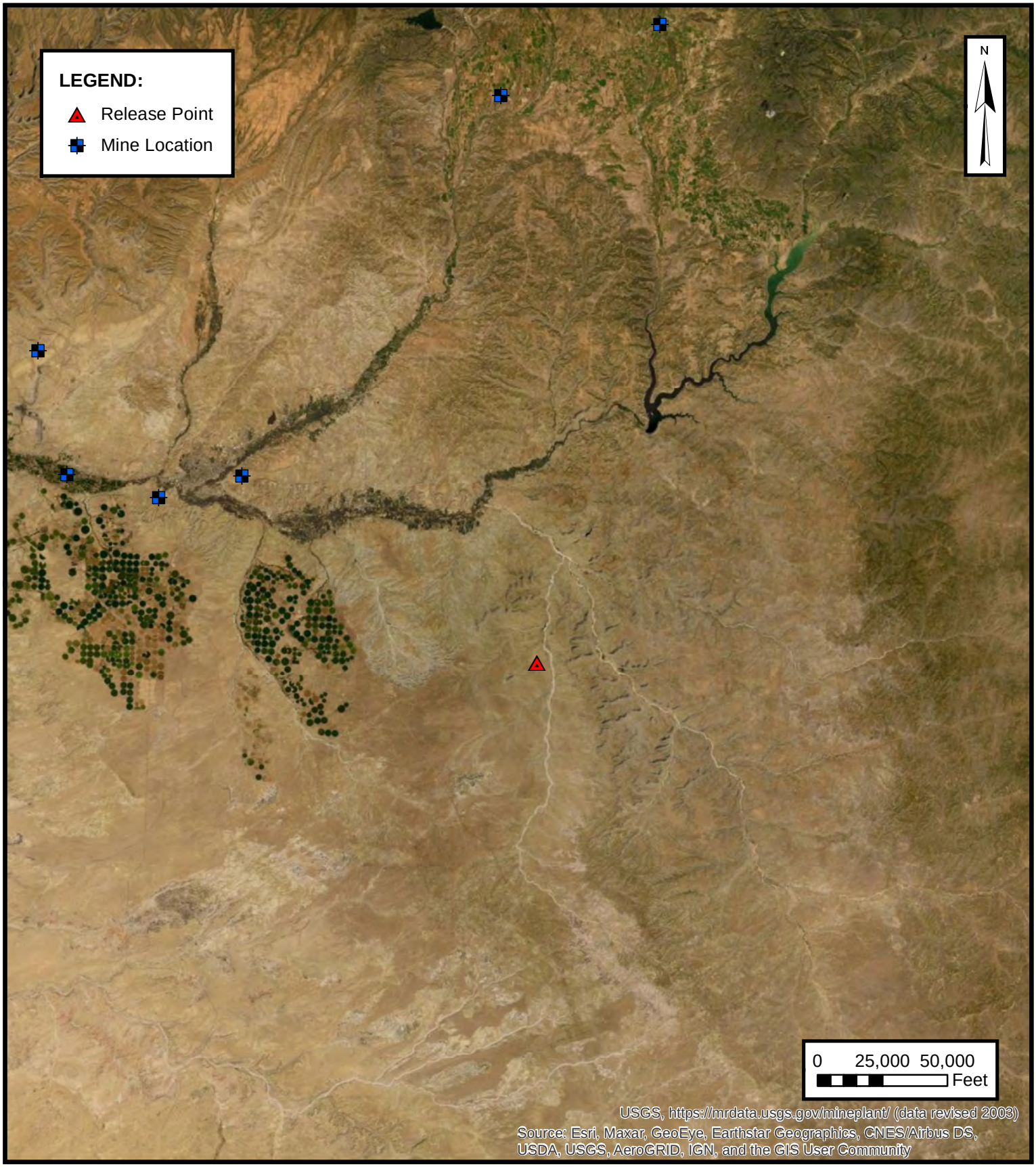
WETLANDS

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE

F



ENSOLUM
Environmental & Hydrogeologic Consultants

MINES, MILLS AND QUARRIES

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE

G

ENSOLUM
Environmental & Hydrogeologic Consultants

100-YEAR FLOOD PLAIN MAP

ENTERPRISE FIELD SERVICES, LLC
HUERFANITO #82M
NW ¼, S25 T27N R9W, San Juan County, New Mexico
36.550869° N, 107.746550° W

PROJECT NUMBER: 05A1226086

FIGURE

H

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

No records found.

PLSS Search:

Section(s): 25, 23, 24, 26, 35, 36 **Township:** 27N **Range:** 09W

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

No records found.

PLSS Search:

Section(s): 19, 30, 31 **Township:** 27N **Range:** 08W

3682

30-045-28948

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

Operator Meridian Oil Inc. Location: Unit I Sec. 26 Twp 29 Rng 07

Name of Well/Wells or Pipeline Serviced

Huerfanito Unit #79M

Elevation ____ Completion Date 9/17/93 Total Depth 408' Land Type F

Casing Strings, Sizes, Types & Depths 9/16 Set 58' of 8" PVC Casing.
No Gas, Water, or Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented
With 16 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 A Water Seep At 102', And A Major Fresh Water Vein At 185'. A Water Sample Was Taken.

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 408' Depth
Used 112 Sacks of Asbury 218R (5600#)

Depths anodes placed: 380', 370', 320', 310', 300', 290', 280', 270', 260', 250', 240', 230', 197', 190', & 144'

Depths vent pipes placed: Surface To 408'.

Vent pipe perforations: Bottom 300'.

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.

#172 30-045-28422
#56 30-045-06400

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

Operator Meridian Oil Co. Location: Unit B Sec. 23 Twp 27 Rng 09

Name of Well/Wells or Pipeline Serviced
Huerfanito Units #172 and #56-23

Elevation 6115 Completion Date 3-4-93 Total Depth 372 Land Type F

Casing Strings, Sizes, Types & Depths 3/3 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 20 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. 130' and was clear.

Depths gas encountered: No gas

Ground bed depth with type & amount of coke breeze used: 372' with
104 (50#) sacks of Asbury Graphitc

Depths anodes placed: #1 is at 350 and #15 is at 160'.

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.

API WATER ANALYSIS REPORT FORM

Laboratory No. 25-930315-11

Company		Sample No.	Date Sampled
MERIDIAN OIL			3-4-93
Field	**Legal Description**	**County or Parish**	**State**
2441 W		San Juan	NM
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	Huerfanito #172		Fruitland	
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**
	Ground Bed	R. Smith

DISSOLVED SOLIDS

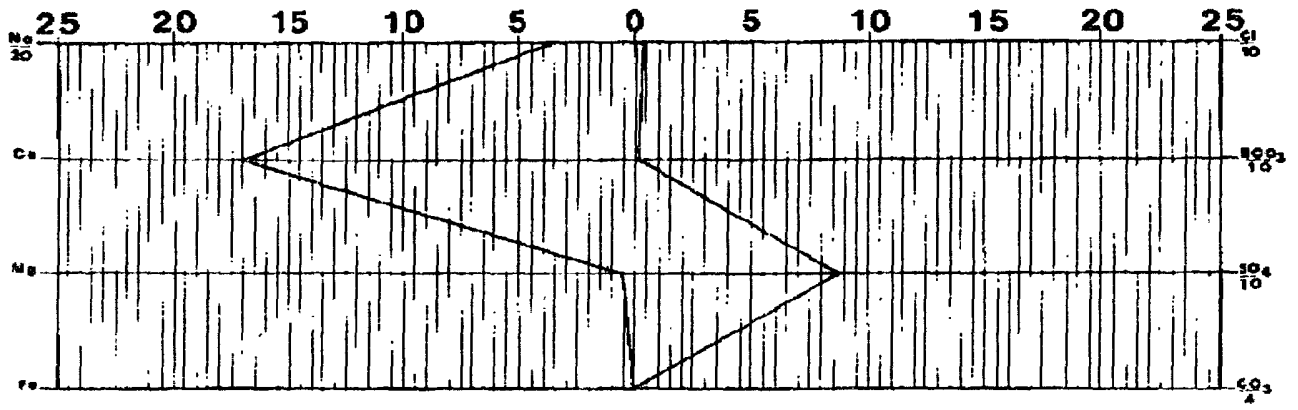
CATIONS	mg/l	me/l
Sodium, Na (calc.)	1700	76
Calcium, Ca	340	17
Magnesium, Mg	7	0.6
Barium, Ba		

ANIONS		
Chloride, Cl	160	4.5
Sulfate, So_4	4200	87
Carbonate, CO_3	-	-
Bicarbonate, HCO_3	110	1.8

OTHER PROPERTIES

pH	7.4
Specific Gravity, 60/60 F.	1.0085
Resistivity (ohm-meters) 71 F.	1.6
Total Dissolved Solids (calc.)	6600
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS: ATTN: BILL DONAHUE



Date Received	Preserved	Date Analyzed	Analyzed By
March 15th, 1993		March 18th, 1993	R.H.

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

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

97057-1060

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

AFE: N45390
PayKey: RB21200
PM: Maron O'Brien

2. Originating Site:
Huerfanito #82M

3. Location of Material (Street Address, City, State or ULSTR):
UL D Section 25 T27N R9W; 36.550869, -107.74655

JAn 2020

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) 46/55 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☒ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) 1-14-2020, 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: Riley Industrial and 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: 1/15/2020
SIGNATURE: _____ TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Huerfanito #82M Pipeline Release
Ensolum Project No. 05A1226086

ENSOLUM

Photograph 1 Photograph Description: View of the final pipeline repair excavation.	
Photograph 2 Photograph Description: View of the excavation after initial restoration.	
Photograph 3 Photograph Description: View of the excavation after initial restoration.	

ENSOLUM

APPENDIX E

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Huerfanito #82M Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Energy Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Excavation Composite Soil Samples													
S-1	1.15.20	C	5	0.017	0.047	<0.034	0.30	0.36	<3.4	<9.6	<48	ND	67
S-2	1.15.20	C	0 to 5	<0.096	<0.19	<0.19	<0.38	ND	<19	<9.5	<48	ND	<60
S-3	1.15.20	C	0 to 5	<0.017	<0.033	<0.033	<0.067	ND	<3.3	<9.5	<47	ND	100
S-4	1.15.20	C	0 to 5	<0.021	<0.042	<0.042	0.087	0.087	<4.2	<9.9	<49	ND	<60
S-5	1.15.20	C	0 to 5	<0.019	<0.038	<0.038	<0.075	ND	<3.8	<9.6	<48	ND	<60

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

ND = Not Detected above the Practical Quantitation Limits or Reporting Limits

NA = Not Analyzed

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 F

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

January 17, 2020

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

RE: Huerfanito 82M OrderNo.: 2001610

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/16/2020 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 **2001610**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-1
Project: Huerfanito 82M
Collection Date: 1/15/2020 2:00:00 PM
Lab ID: 2001610-001 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	67	60		mg/Kg	20	1/16/2020 12:35:02 PM	49854
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/16/2020 11:21:44 AM	49852
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/16/2020 11:21:44 AM	49852
Surr: DNOP	92.8	55.1-146		%Rec	1	1/16/2020 11:21:44 AM	49852
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	1/16/2020 10:52:01 AM	49833
Surr: BFB	89.5	66.6-105		%Rec	1	1/16/2020 10:52:01 AM	49833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.017	0.017		mg/Kg	1	1/16/2020 10:52:01 AM	49833
Toluene	0.047	0.034		mg/Kg	1	1/16/2020 10:52:01 AM	49833
Ethylbenzene	ND	0.034		mg/Kg	1	1/16/2020 10:52:01 AM	49833
Xylenes, Total	0.30	0.067		mg/Kg	1	1/16/2020 10:52:01 AM	49833
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	1/16/2020 10:52:01 AM	49833

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	Value above quantitation range
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 range due to dilution or matrix		

Analytical Report
Lab Order **2001610**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-2
Project: Huerfanito 82M
Collection Date: 1/15/2020 2:05:00 PM
Lab ID: 2001610-002 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	60		mg/Kg	20	1/16/2020 12:47:23 PM	49854
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/16/2020 11:30:49 AM	49852
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/16/2020 11:30:49 AM	49852
Surr: DNOP	95.1	55.1-146		%Rec	1	1/16/2020 11:30:49 AM	49852
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	1/16/2020 11:15:23 AM	49833
Surr: BFB	83.0	66.6-105		%Rec	5	1/16/2020 11:15:23 AM	49833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.096		mg/Kg	5	1/16/2020 11:15:23 AM	49833
Toluene	ND	0.19		mg/Kg	5	1/16/2020 11:15:23 AM	49833
Ethylbenzene	ND	0.19		mg/Kg	5	1/16/2020 11:15:23 AM	49833
Xylenes, Total	ND	0.38		mg/Kg	5	1/16/2020 11:15:23 AM	49833
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	5	1/16/2020 11:15:23 AM	49833

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

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 range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2001610**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Project: Huerfanito 82M
Lab ID: 2001610-003 **Matrix:** SOIL

Client Sample ID: S-3
Collection Date: 1/15/2020 2:10:00 PM
Received Date: 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	100	61		mg/Kg	20	1/16/2020 12:59:44 PM	49854
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/16/2020 11:39:52 AM	49852
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/16/2020 11:39:52 AM	49852
Surr: DNOP	111	55.1-146		%Rec	1	1/16/2020 11:39:52 AM	49852
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	1/16/2020 11:38:40 AM	49833
Surr: BFB	80.9	66.6-105		%Rec	1	1/16/2020 11:38:40 AM	49833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	1/16/2020 11:38:40 AM	49833
Toluene	ND	0.033		mg/Kg	1	1/16/2020 11:38:40 AM	49833
Ethylbenzene	ND	0.033		mg/Kg	1	1/16/2020 11:38:40 AM	49833
Xylenes, Total	ND	0.067		mg/Kg	1	1/16/2020 11:38:40 AM	49833
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	1/16/2020 11:38:40 AM	49833

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	Value above quantitation range
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 range due to dilution or matrix		

Analytical Report
Lab Order **2001610**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-4
Project: Huerfanito 82M
Collection Date: 1/15/2020 2:15:00 PM
Lab ID: 2001610-004 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	60		mg/Kg	20	1/16/2020 1:36:47 PM	49854
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/16/2020 11:48:57 AM	49852
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/16/2020 11:48:57 AM	49852
Surr: DNOP	98.0	55.1-146		%Rec	1	1/16/2020 11:48:57 AM	49852
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	1/16/2020 12:01:56 PM	49833
Surr: BFB	85.9	66.6-105		%Rec	1	1/16/2020 12:01:56 PM	49833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	1/16/2020 12:01:56 PM	49833
Toluene	ND	0.042		mg/Kg	1	1/16/2020 12:01:56 PM	49833
Ethylbenzene	ND	0.042		mg/Kg	1	1/16/2020 12:01:56 PM	49833
Xylenes, Total	0.087	0.083		mg/Kg	1	1/16/2020 12:01:56 PM	49833
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	1/16/2020 12:01:56 PM	49833

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	Value above quantitation range
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 range due to dilution or matrix		

Analytical Report
Lab Order **2001610**
Date Reported: **1/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-5
Project: Huerfanito 82M
Collection Date: 1/15/2020 2:20:00 PM
Lab ID: 2001610-005 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	60		mg/Kg	20	1/16/2020 1:49:07 PM	49854
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/16/2020 11:58:00 AM	49852
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/16/2020 11:58:00 AM	49852
Surr: DNOP	105	55.1-146		%Rec	1	1/16/2020 11:58:00 AM	49852
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	1/16/2020 12:25:15 PM	49833
Surr: BFB	81.6	66.6-105		%Rec	1	1/16/2020 12:25:15 PM	49833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	1/16/2020 12:25:15 PM	49833
Toluene	ND	0.038		mg/Kg	1	1/16/2020 12:25:15 PM	49833
Ethylbenzene	ND	0.038		mg/Kg	1	1/16/2020 12:25:15 PM	49833
Xylenes, Total	ND	0.075		mg/Kg	1	1/16/2020 12:25:15 PM	49833
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	1/16/2020 12:25:15 PM	49833

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	Value above quantitation range
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 range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001610**
17-Jan-20

Client: ENSOLUM
Project: Huerfanito 82M

Sample ID: **MB-49854** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **49854** RunNo: **65853**
Prep Date: **1/16/2020** Analysis Date: **1/16/2020** SeqNo: **2262297** Units: **mg/Kg**

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

Sample ID: **LCS-49854** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **49854** RunNo: **65853**
Prep Date: **1/16/2020** Analysis Date: **1/16/2020** SeqNo: **2262298** 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 range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001610**

17-Jan-20

Client: ENSOLUM

Project: Huerfanito 82M

Sample ID: **LCS-49852** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49852** RunNo: **65840**

Prep Date: **1/16/2020** Analysis Date: **1/16/2020** SeqNo: **2261201** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.6	63.9	124			
Surr: DNOP	3.8		5.000		76.6	55.1	146			

Sample ID: **MB-49852** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **49852** RunNo: **65840**

Prep Date: **1/16/2020** Analysis Date: **1/16/2020** SeqNo: **2261204** 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	9.9		10.00		99.5	55.1	146			

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 range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001610**

17-Jan-20

Client: ENSOLUM

Project: Huerfanito 82M

Sample ID: **mb-49833** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **49833** RunNo: **65850**

Prep Date: **1/15/2020** Analysis Date: **1/16/2020** SeqNo: **2261657** 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	870		1000		86.5	66.6	105			

Sample ID: **lcs-49833** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **49833** RunNo: **65850**

Prep Date: **1/15/2020** Analysis Date: **1/16/2020** SeqNo: **2261658** 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	94.6	80	120			
Surr: BFB	940		1000		93.7	66.6	105			

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 range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001610**

17-Jan-20

Client: ENSOLUM

Project: Huerfanito 82M

Sample ID: **mb-49833** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49833** RunNo: **65850**

Prep Date: **1/15/2020** Analysis Date: **1/16/2020** SeqNo: **2261675** 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	0.99		1.000		98.7	80	120			

Sample ID: **LCS-49833** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49833** RunNo: **65850**

Prep Date: **1/15/2020** Analysis Date: **1/16/2020** SeqNo: **2261676** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.4	80	120			

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 range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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 AZTEC Work Order Number: 2001610 RcptNo: 1

Received By: Desiree Dominguez 1/16/2020 7:50:00 AM

Completed By: Anne Thorne 1/16/2020 8:29:23 AM

Reviewed By: IO 01/16/2020

Chain of Custody

1. Is Chain of Custody sufficiently 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: AT 01/16/20

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:

CUSTODY SEALS INTACT ON SOIL JARS/at 1/16/20

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Suit A 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 100%
☐ Standard ☒ Rush 48-hr

Project Name: Huerfanito #82m

Project #: 05A1226086F

Project Manager: K Summers

Sampler: CD Aponte

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 3.4 - 0.0 = 3.4°C

HEAL No. 2001610

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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, NO3, NO2, PO4, SO4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/15/20	1400	S	S-1	1 4oz Jar	Cool	001	X	X					X			
	1405	S	S-2			002	X	X					X			
	1410	S	S-3			003	X	X					X			
	1415	S	S-4			004	X	X					X			
	1420	S	S-5			005	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/15/20	1557		Chant Watt		1/15/20	1557
1/15/20	1817	Chant Watt		Courier	1/16/20	7:50

Remarks: Pm Tom Long
Proj Key R021200
AFE # N45350
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.

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

Analysis Request

ENSOLUM

APPENDIX G

Regulatory Correspondence

From: Smith, Cory, EMNRD
To: Long, Thomas
Subject: RE: Huerfano #82M - UL D Section 25 T27N R9W; 36.550869, -107.746551
Date: Tuesday, January 21, 2020 7:53:03 AM

Tom,

Looks good, please submit your Final C-141 with all attachments etc.

Thanks,

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, January 17, 2020 7:13 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] FW: Huerfano #82M - UL D Section 25 T27N R9W; 36.550869, -107.746551

Cory/Steve,

Please find the attached site sketch and lab report for the Huerfanito #82M excavation. All sample results are below NMOCD Tier 1 standards. Enterprise will backfill with clean imported material. 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: Long, Thomas
Sent: Thursday, January 16, 2020 7:38 AM
To: 'Chad D'Aponti' <cdaponti@ensolum.com>; 'Steve Austin' <nnepawq@frontiernet.net>

Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Huerfano #82M - UL D Section 25 T27N R9W; 36.550869, -107.746551

Cory/Steve,

This is a follow up to our phone conversation yesterday. Enterprise determined this release reportable per NMOCD regulation due to the volume of impacted subsurface soil. Enterprise will submit the required C-141 documentation. Enterprise proceeded with collection of soil samples for laboratory analysis. Enterprise utilized the 200 square foot sampling interval. 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: Long, Thomas
Sent: Monday, January 6, 2020 2:09 PM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; 'Steve Austin' <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: Huerfano #82M - UL D Section 25 T27N R9W; 36.550869, -107.746551

Cory/Steve,

This is a courtesy notification that Enterprise had a release of natural gas and natural gas liquids on the Huerfano #82M well tie on today. No washes were affected. Minimal liquids were released to the ground surface. The pipeline has been depressurized, locked out and tagged out. Enterprise has not yet determined this release reported per NMOCD regulation. The release is located at UL D Section 25 T27N R9W; 36.550869, -107.746551. I will keep you informed on the reporting status and remediation efforts if any. 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

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 10908

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 10908
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/16/2022