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)*: **NRM2010735527**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.75538** Longitude **-107.97539** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral 3B-7 Hydro Test Release**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **04/07/2020**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
G	**3**	**29N**	**11W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name*: **D & C Properties, LLC**)

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):	Volume Recovered (bbls):
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☒ Other (describe) **Hydro-static Test Water**	Volume/Weight Released (provide units): **> 25 Barrels**	Volume/Weight Recovered (provide units) **None**

Cause of Release On April 7, 2020, Enterprise discovered a release of hydro-static test water (potable water) from the Lateral 3B-7 pipeline. An area of approximately 30 feet in diameter on the ground surface was impacted by the release fluids. In addition, the released fluids flowed south approximately 600 feet. No washes/waterways were affected. Evaluation of the release was performed from April 14, 2020 through April 20, 2020. The final excavation dimensions measured approximately 14 feet long by 10 feet wide by approximately 7 feet deep. No surface or subsurface environmental impacts in exceedance of NMOCD Tier I remediation standards were observed. 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: 11/30/2020

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: 05/20/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Lateral 3B-7 Hydrotest Release
NE ¼, S3 T29N R11W
San Juan County, New Mexico

September 18, 2020
Ensolum Project No. 05A1226101

Prepared for:

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

Prepared by:

Chad D'Aponti
Field Environmental Scientist

Landon Daniell
Staff Geologist

Kyle Summers, CPG
Senior Project Manager

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ENSOLUM

CLOSURE REPORT

Lateral 3B-7 Hydrotest Release
NE ¼, S3 T29N R11W
San Juan County, New Mexico

Ensolum Project No. 05A1226101

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral 3B-7 Hydrotest Release
Location:	36.75538° North, 107.97539° West Northeast (NE) ¼ of Section 3, Township 29 North, Range 11 West San Juan County, New Mexico
Property:	Private Property
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On April 7, 2020, while initiating a hydrostatic pressure test utilizing potable water on the Lateral 3B-7 pipeline, a leak was identified. On April 14, 2020, Enterprise initiated activities to disconnect and cap the affected pipeline and remediate potential petroleum hydrocarbon impact resulting from the release. The pipeline is not in service.

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 New Mexico EMNRD OCD. To address activities related to oil and gas releases, the New Mexico EMNRD OCD references 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. Ensolum, LLC (Ensolum) utilized information provided by Enterprise, 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). Four (4) PODs (SJ-01995, SJ-01887, SJ-03658, and SJ-04046

POD1-POD8) were identified in the OSE WRRS database within a one-mile radius of the Site. No depths to water are listed for SJ-01995, SJ-01887, or SJ-03658, but the total depths of the wells range from 50 feet bgs to 100 feet bgs. The plugging plan documents for the monitoring well network (SJ 04046 POD1-POD8) that was located at the Conoco Phillips Company Martin 34 No. 2 well site, approximately 0.55 miles north of the Site and at a higher elevation (5,764 feet) than the Site (5,714 feet), indicate an average depth to water of 40 feet bgs. The average depth to water for additional PODs located over one (1) mile in adjacent Sections is approximately 47 feet bgs. Supporting documentation is provided in **Appendix B**.

- No cathodic-protection wells were identified within one mile of the Site.
- 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 200 feet west of the location.
- 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 residence is located approximately 530 feet north of the Site.
- According to information provided in the OSE WRRS database, 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 information provided in the OSE WRRS database there is one (1) fresh water well within 1,000 feet of the Site. POD SJ-01995 is located approximately 625 feet northwest of the Site. Additionally, there are residences located less than 1,000 feet from the Site that may have unregistered water wells.
- The Site is 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. The Site is located within the City of Bloomfield.
- 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 on 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	50 mg/kg
Benzene	EPA SW-846 Method 8021	10 mg/kg

3.0 SOIL REMEDIATION ACTIVITIES

On April 14, 2020, Enterprise initiated activities to disconnect and cap the affected pipeline and remediate potential petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities, Riley Industrial Services, Inc., and Sierra Oilfield Services, Inc., provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 14 feet long and 10 feet wide at the maximum extents, with a maximum depth of approximately seven (7) feet bgs. The flow path measured approximately 700 feet long, with an average width of approximately two (2) feet. The flow path exhibited minimal vertical saturation.

The lithology encountered during the completion of remediation activities consisted of unconsolidated silty sandy clay.

A total of approximately 45 barrels (bbls) of hydro-excavation soil cuttings and water were transported to the Industrial Ecosystems, Inc. (IEI) landfarm on Crouch Mesa near Aztec, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix C**. The excavation was backfilled with imported fill and was subsequently contoured to the surrounding grade.

Figure 3 (**Appendix A**) is a map that identifies the approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline. 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 and the flow path utilizing 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) and seven (7) composite soil flow-path samples (FP-1 through FP-7), 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 flow path. A backhoe bucket was utilized to collect aliquots from the sidewalls and floor of the excavation. The New Mexico EMNRD OCD provided verbal approval to proceed with the sampling events although a New Mexico EMNRD OCD representative was not present during sampling activities.

First Sampling Event
On April 14, 2020, composite soil samples FP-1 through FP-7 (all at depths of 0' to 0.25') were collected from the flow path.

Second Sampling Event
On April 22, 2020, composite soil sample S-1 (7') was collected from the floor of the excavation. Composite soil samples S-2 (0-7'), S-3 (0-7'), S-4 (0-7'), and S-5 (0-7') were collected from the sidewalls of the excavation.

The 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, 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 concentrations or laboratory supplied practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1 through S-19 and FP-1 through FP-7) to the applicable New Mexico EMNRD OCD closure criteria.

- The laboratory analytical results for the composite soil samples indicate that 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 milligrams per kilogram (mg/kg).

- The laboratory analytical results for the composite soil samples indicate that 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 composite soil samples S-3 and S-4 indicate a combined TPH GRO/DRO/MRO concentration of 28 mg/kg and 29 mg/kg, respectively, which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining 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 the composite soil samples indicate that 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/REVEGETATION

Enterprise backfilled the excavation with imported fill and resurfaced it to provide a suitable driving surface.

8.0 FINDINGS AND RECOMMENDATION

- A total of 12 composite soil samples were collected from the excavation and flow path. Based on laboratory analytical results, the soils remaining in place do not exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria.

- A total of approximately 45 bbls of hydro-excavation soil cuttings and water were transported to the IEI landfarm for disposal/remediation. The excavation was backfilled with imported fill and was subsequently 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.

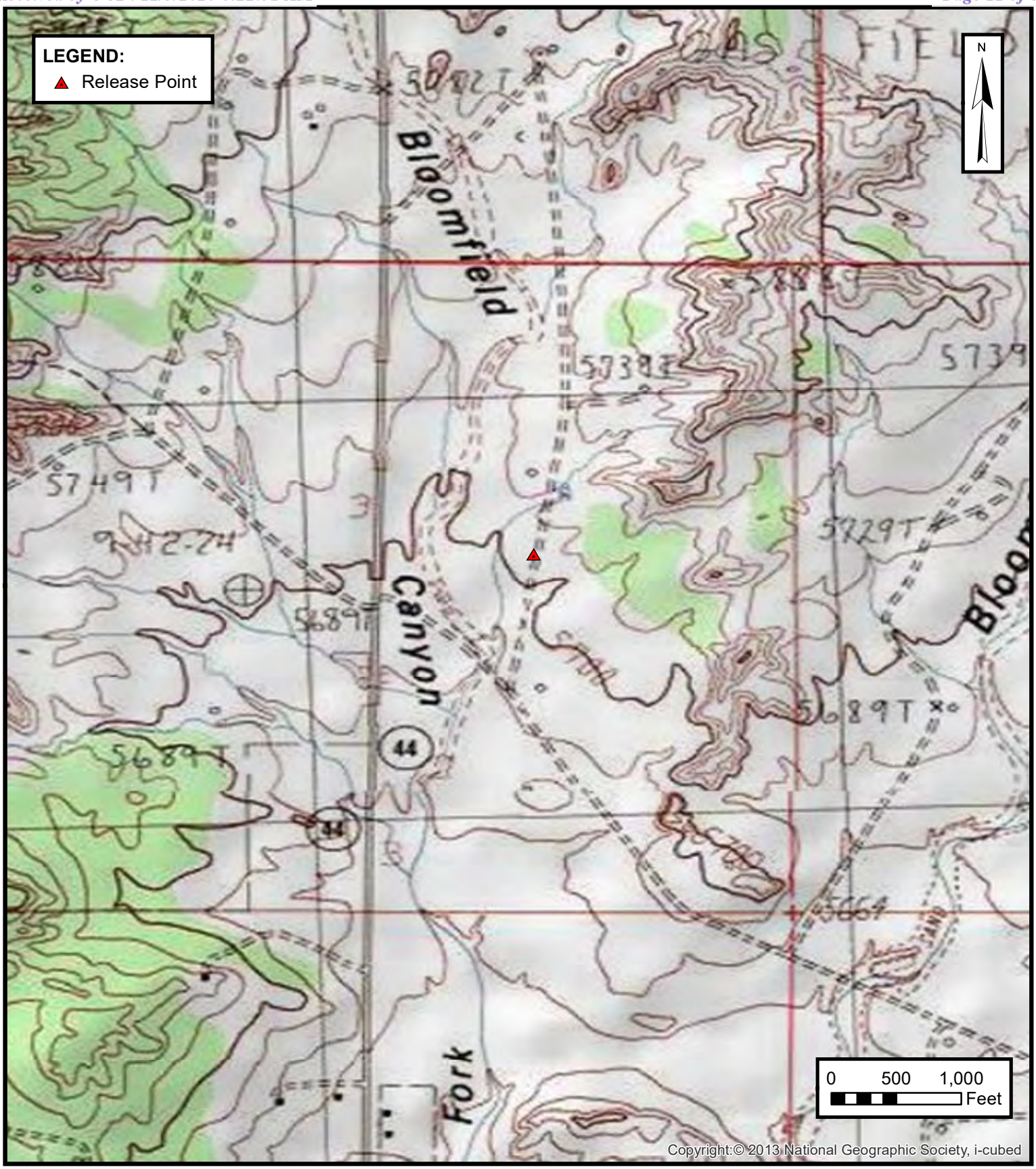
9.3 Reliance

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 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



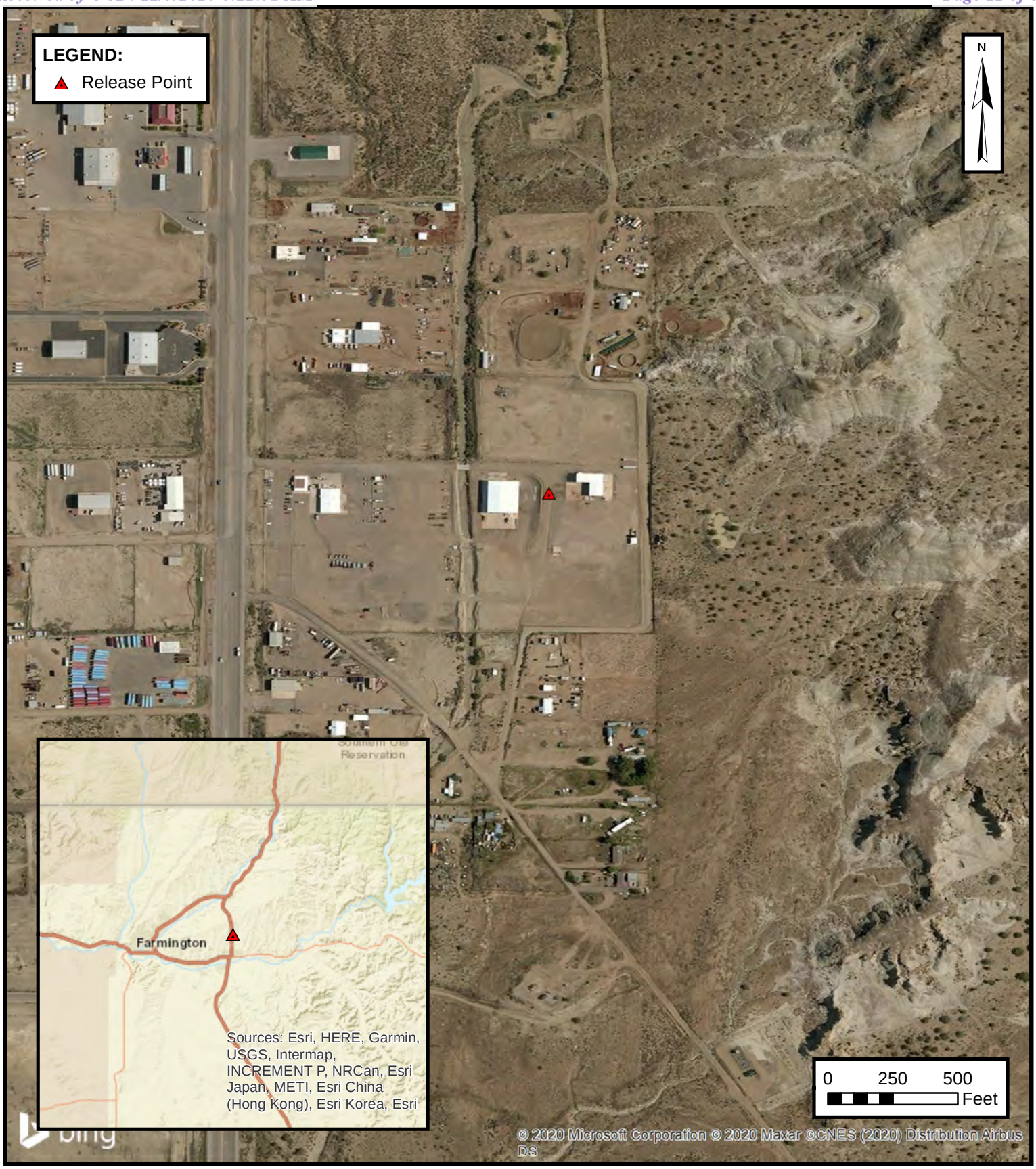
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST
NE ¼, S3 T29N 11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE
1



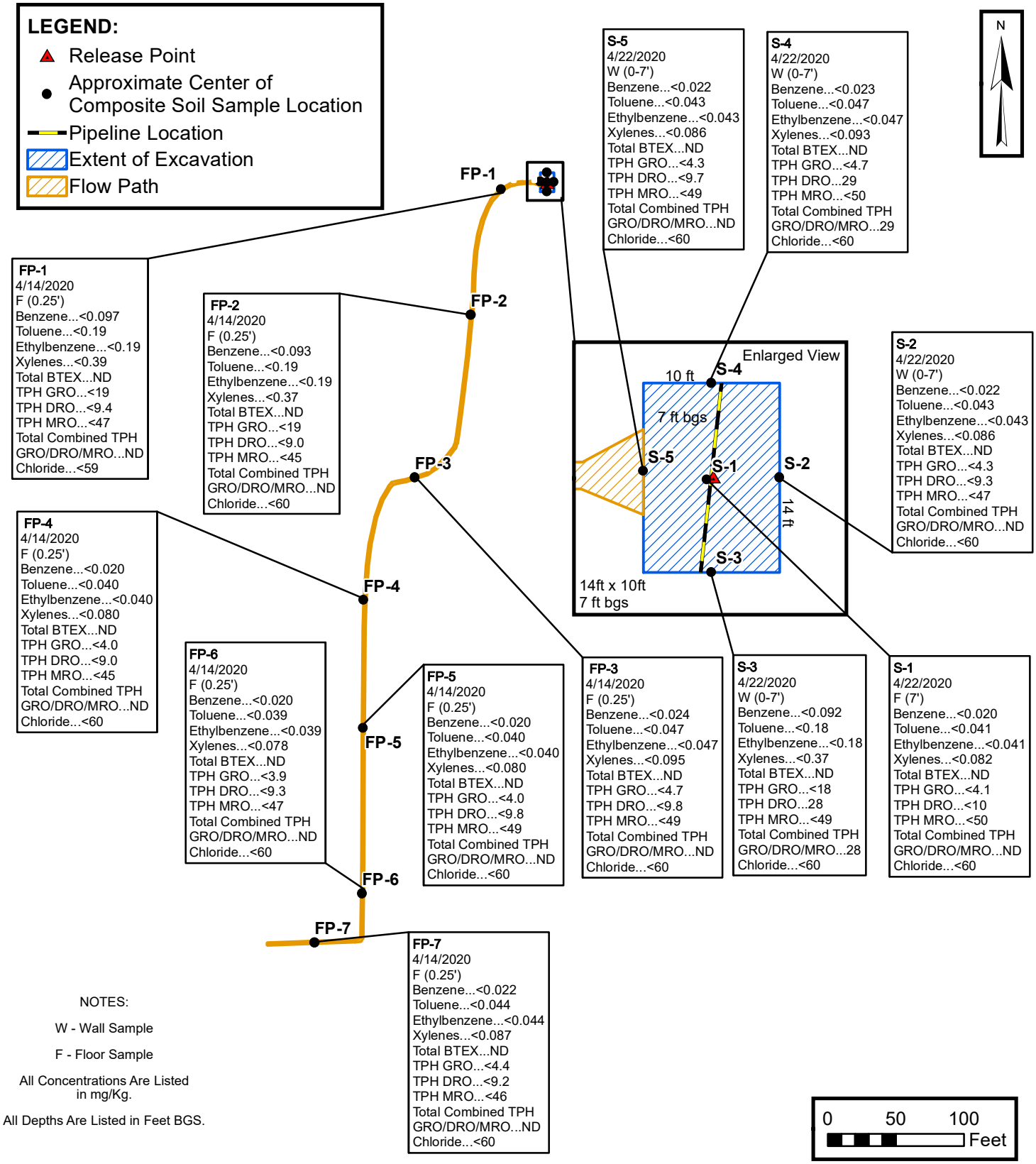
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE
2



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Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N 11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

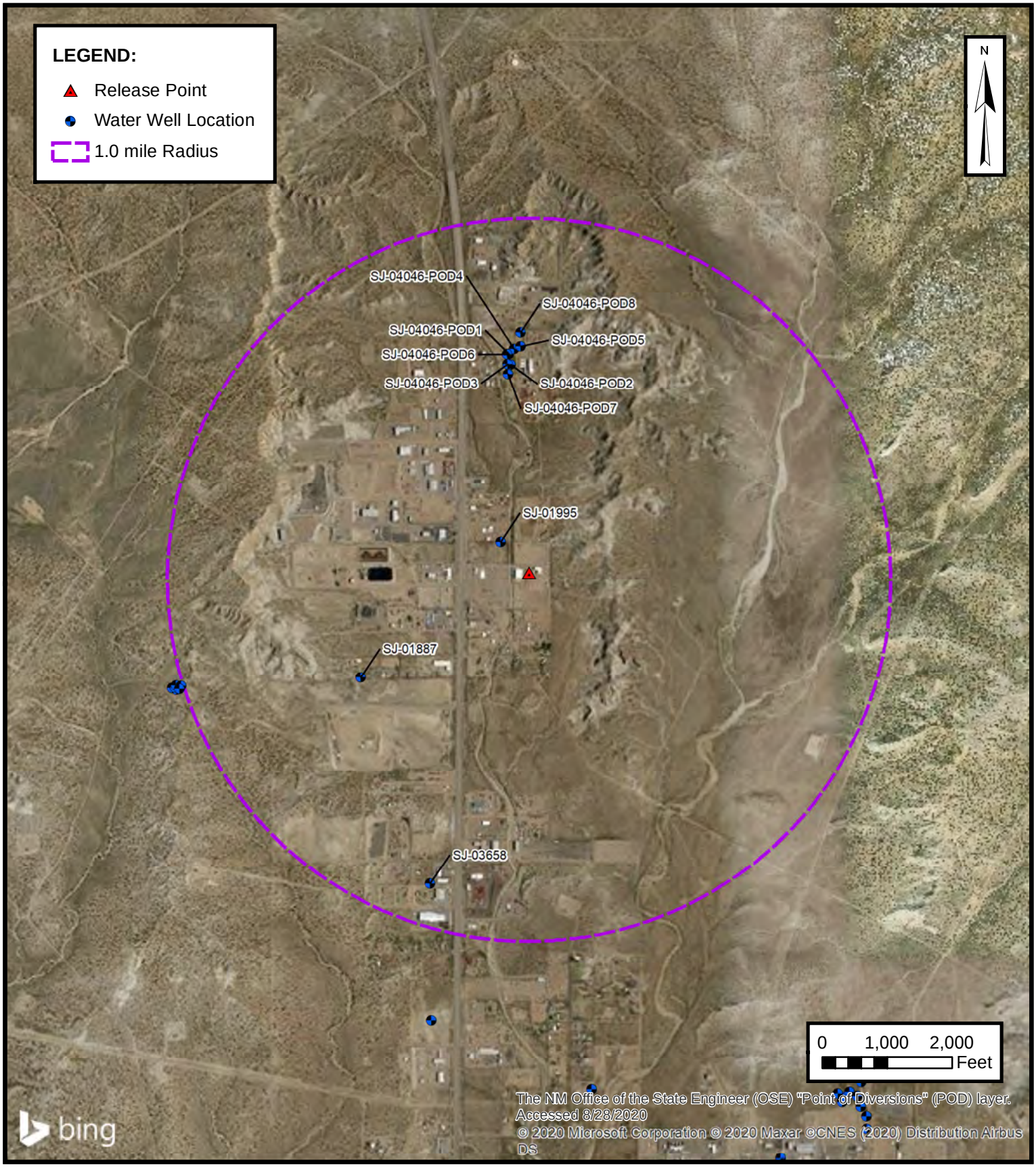
PROJECT NUMBER: 05A1226101

FIGURE
3

ENSOLUM

APPENDIX B

Siting Documentation



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ONE MILE RADIUS WATER WELL MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE

A

ENSOLUM
Environmental & Hydrogeologic Consultants

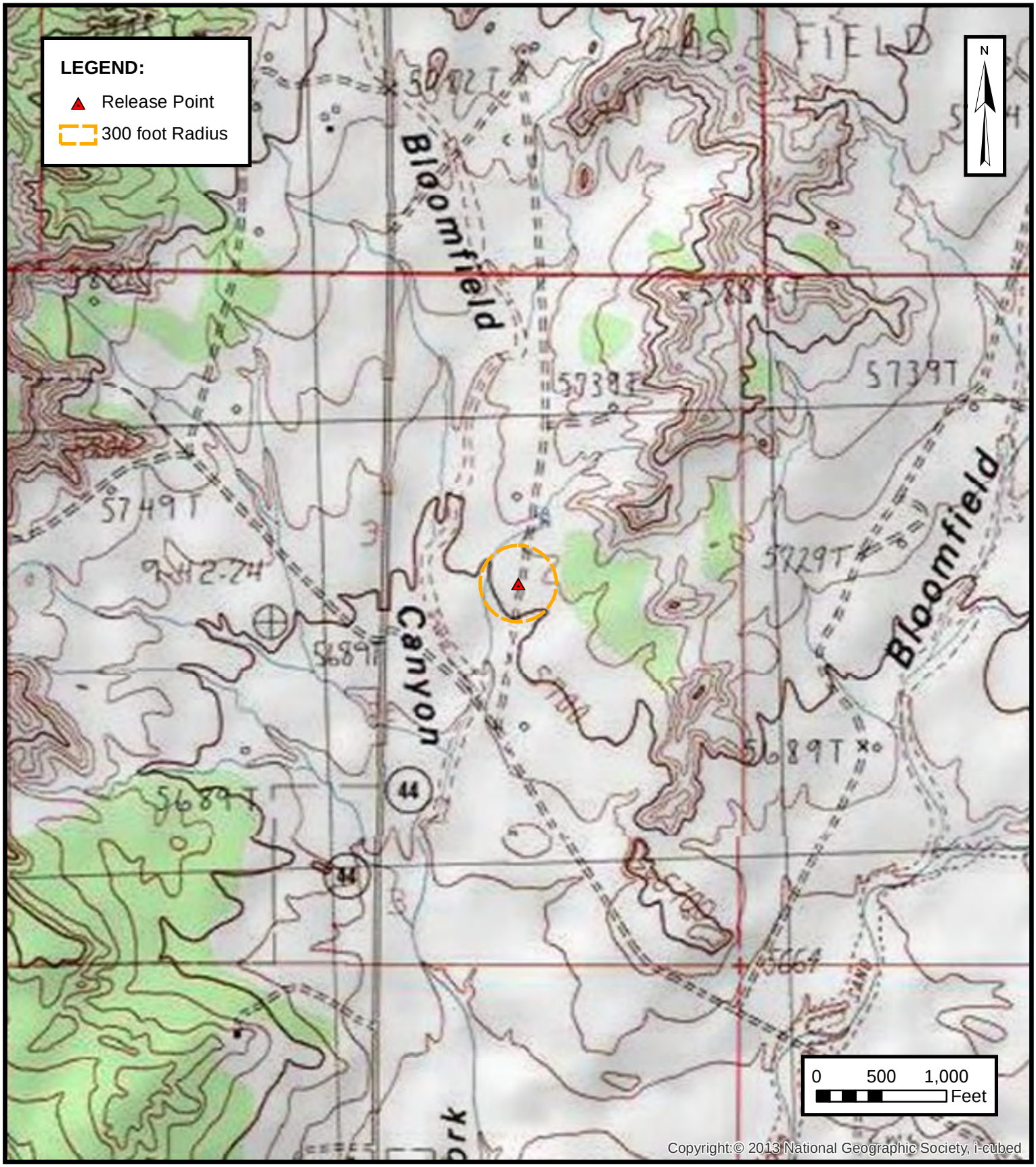
CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE

B



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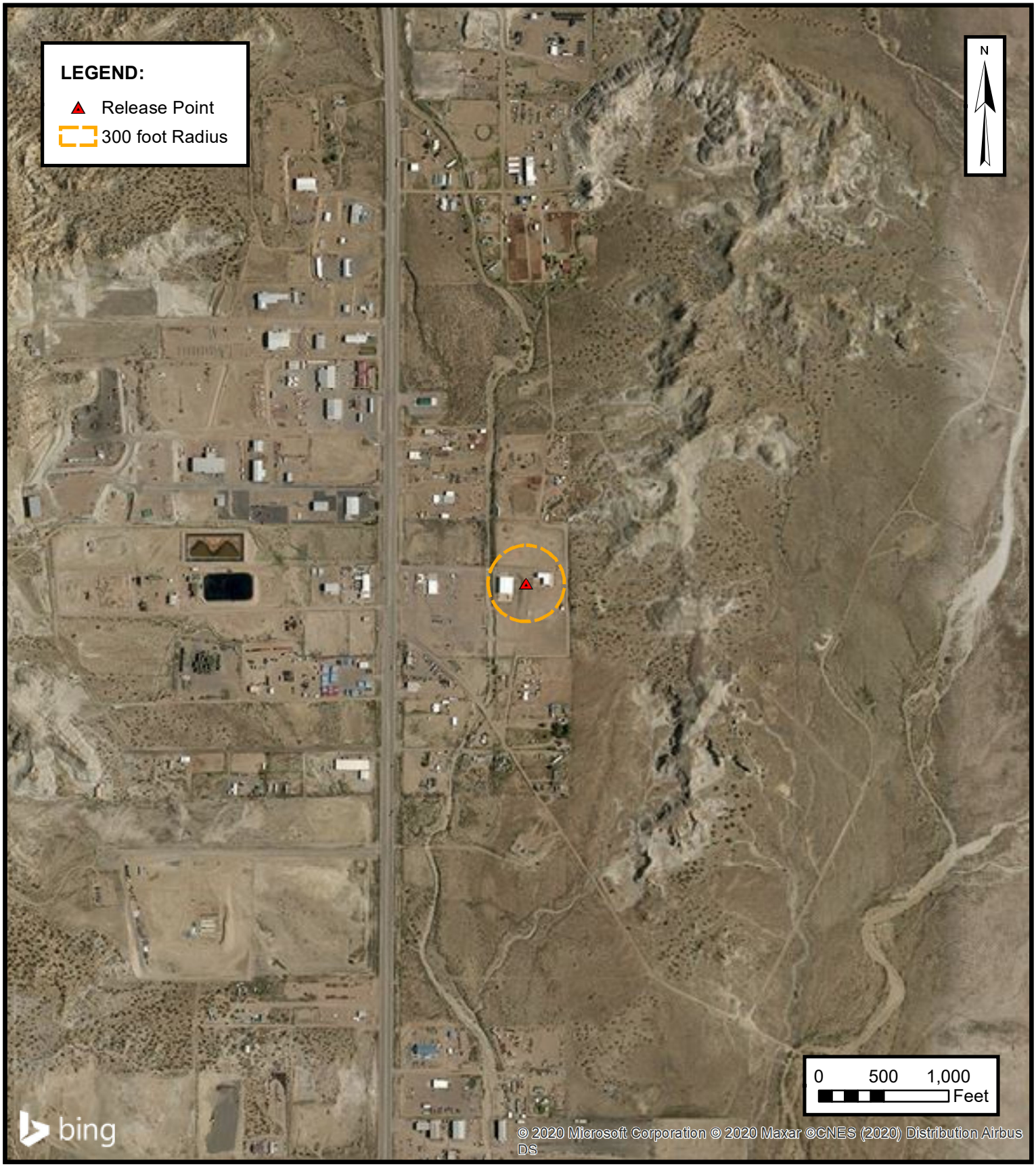
300-FOOT RADIUS
WATERCOURSE AND DRAINAGE IDENTIFICATION
ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE
C



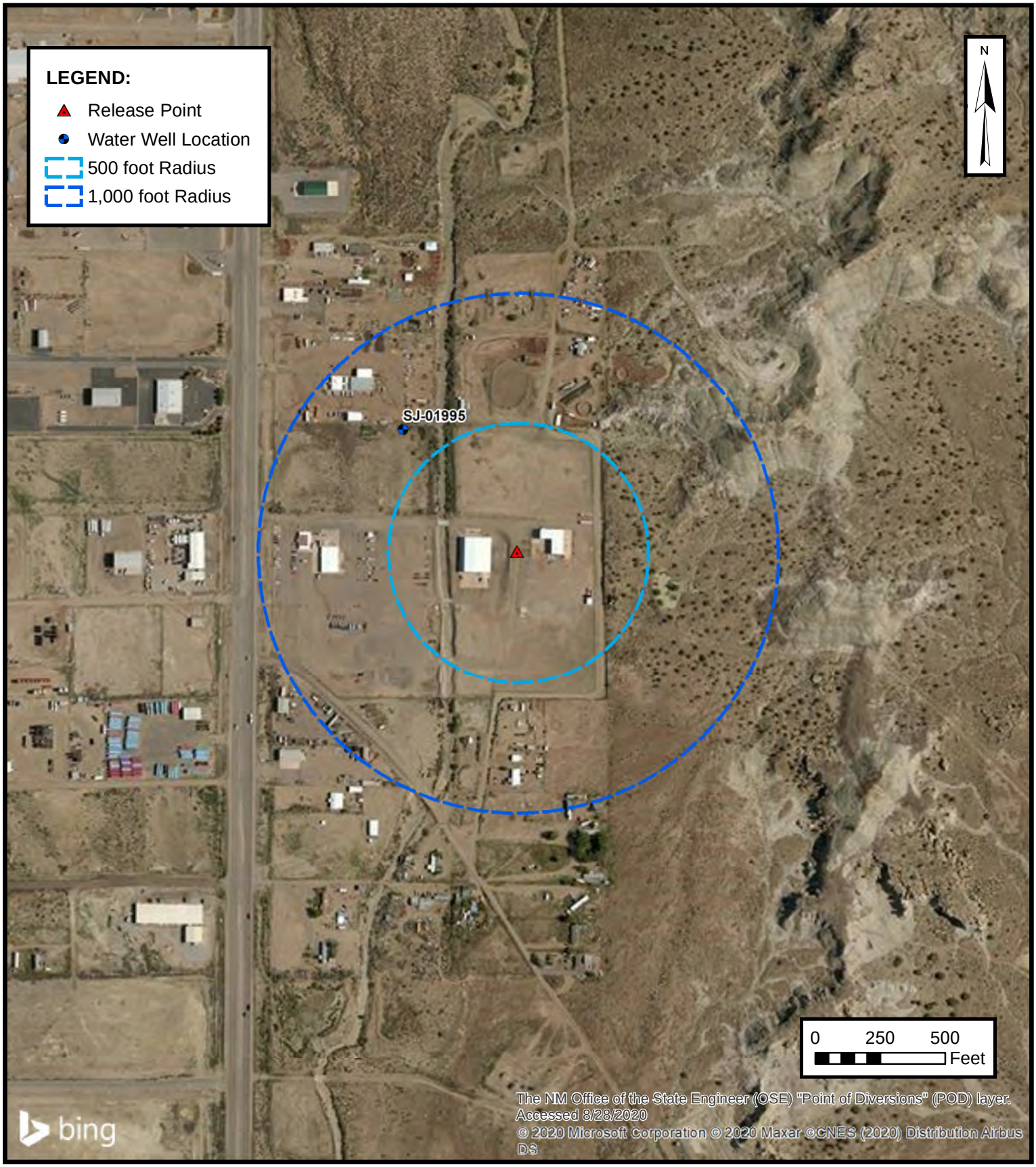
ENSOLUM
Environmental & Hydrogeologic Consultants

300-FOOT RADIUS
OCCUPIED STRUCTURE IDENTIFICATION

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE
D



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Environmental & Hydrogeologic Consultants

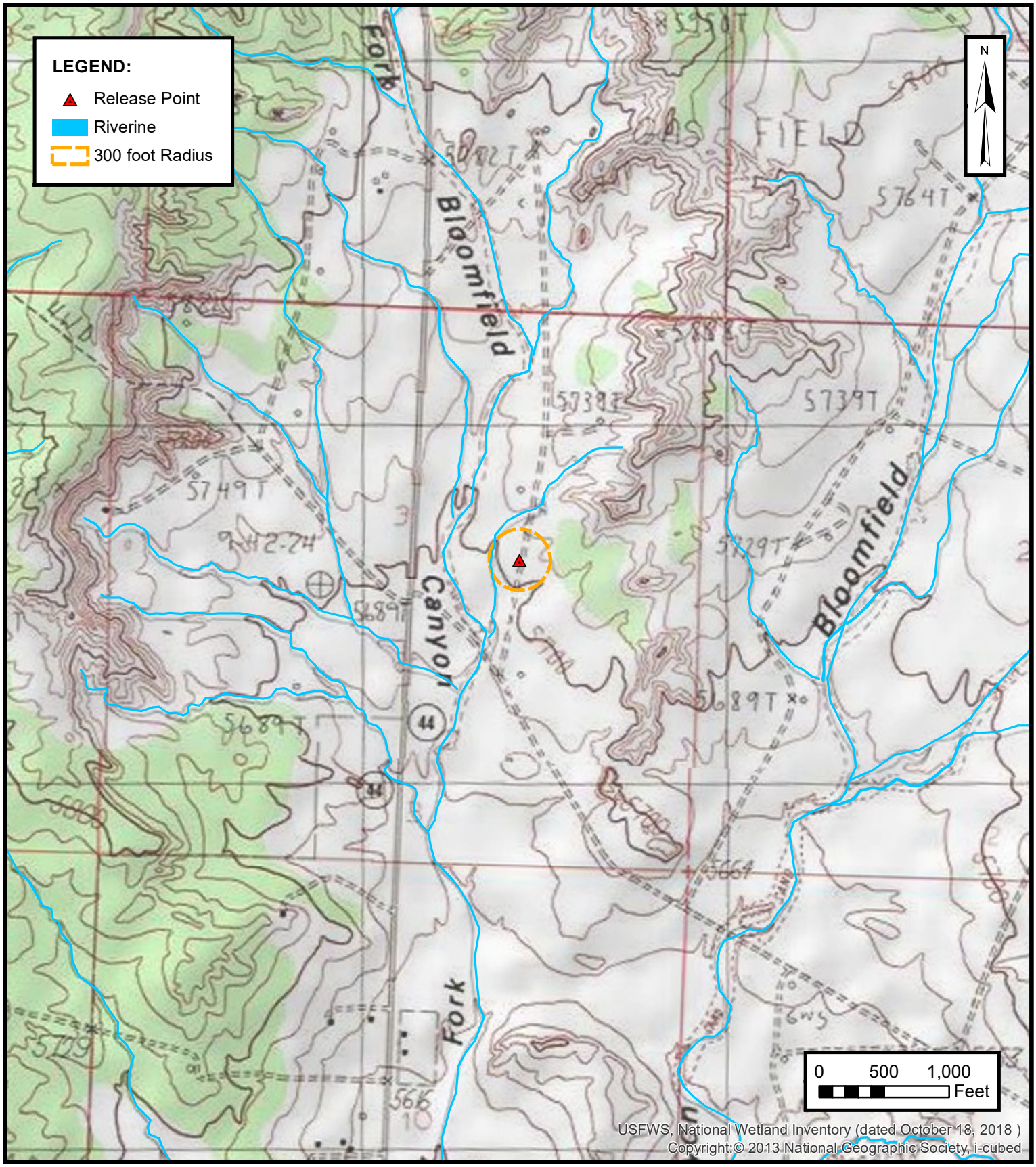
WATER WELL AND NATURAL SPRING LOCATION

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE

E



ENSOLUM
Environmental & Hydrogeologic Consultants

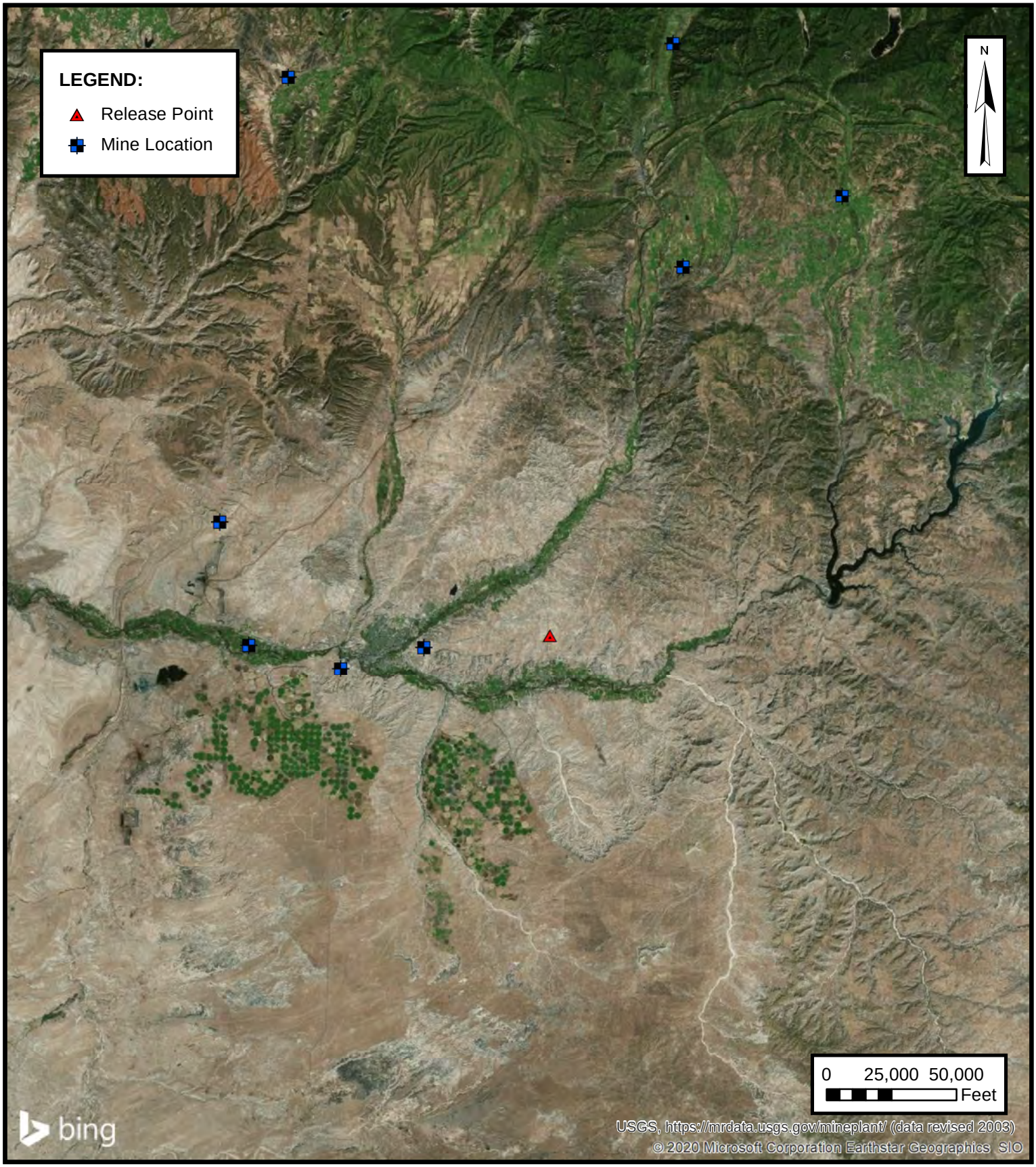
WETLANDS

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE

F



ENSOLUM
Environmental & Hydrogeologic Consultants

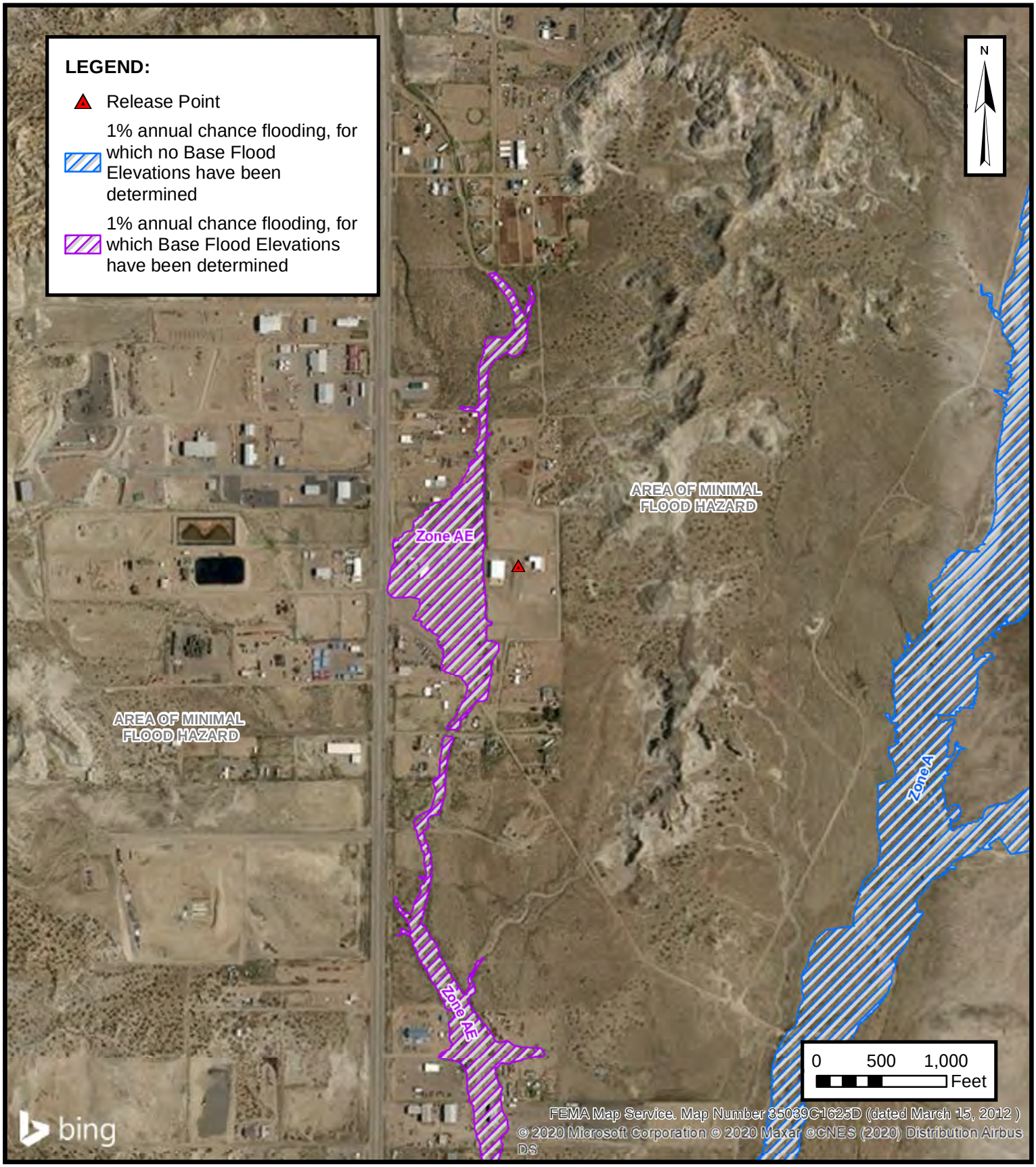
MINES, MILLS AND QUARRIES

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE

G



ENSOLUM
Environmental & Hydrogeologic Consultants

100-YEAR FLOOD PLAIN MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 3B-7 HYDROTEST RELEASE
NE ¼, S3 T29N R11W, San Juan County, New Mexico
36.75538° N, 107.97539° W

PROJECT NUMBER: 05A1226101

FIGURE

H

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 01851	SJM2	SJ		4	4	10	29N	11W	234586	4069572*	125	48	77
SJ 02466	SJM2	SJ	3	3	4	11	29N	11W	235669	4069518	66		
SJ 02466 S	SJM2	SJ	3	3	4	11	29N	11W	235693	4069503	65		
SJ 04254 POD1	SJ	SJ		3	4	11	29N	11W	235793	4069359	100	63	37
SJ 04254 POD2	SJ	SJ		3	4	11	29N	11W	235791	4069416	102	60	42
SJ 04254 POD3	SJ	SJ		3	4	11	29N	11W	235688	4069482	85	46	39
SJ 04254 POD4	SJ	SJ		3	4	11	29N	11W	235754	4069504	100	41	59
SJ 04254 POD5	SJ	SJ		3	4	11	29N	11W	235721	4069524	100	63	37
SJ 04254 POD6	SJ	SJ		3	4	11	29N	11W	235774	4069567	100	64	36
SJ 04254 POD7	SJ	SJ		3	4	11	29N	11W	235615	4069664	85	35	50
SJ 04254 POD8	SJ	SJ		3	4	11	29N	11W	235667	4069675	88	39	49
SJ 04254 POD9	SJ	SJ		3	4	11	29N	11W	235645	4069741	79	23	56

Average Depth to Water: **48 feet**

Minimum Depth: **23 feet**

Maximum Depth: **64 feet**

Record Count: 12

PLSS Search:

Section(s): 3, 2, 4, 9, 10, 11 **Township:** 29N **Range:** 11W

***UTM location was derived from PLSS - see Help**

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 03841 POD10	SJ	SJ			3	34	30N	11W	261236	4075354	42	30	12

Average Depth to Water: **30 feet**

Minimum Depth: **30 feet**

Maximum Depth: **30 feet**

Record Count: 1

PLSS Search:

Section(s): 33, 34, 35 **Township:** 30N **Range:** 11W

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ-4046 POD1 (MW-1)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, 50.40 sec
Longitude: -107 deg, 58 min, 34.808 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 41.4 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 37.1 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2/12/18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE RECEIVED 2018 MAR -1 AM 11:00

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	6.5	6.62	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2018 MAR -1 AM 11:00

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Geo. A. Madrid — Signature of Well Driller

02-27-2018 — Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ-4046 POD2 (MW-2)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: P.P. Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, 48.60 sec
Longitude: -107 deg, 58 min, 34.80 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 40.9 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 36.0 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2/12/2018

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE AZTEC, NEW MEXICO 2018 MAR -1 AM 11:00

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	6.46	6.54	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2018 MAR -1 AM 11:00

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

George A. Madrid — 02-27-2018

Signature of Well Driller — Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: **A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ-4046 POD3 (MW-3)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, ~~XX.XX~~ 48.84 sec
Longitude: -107 deg, 58 min, ~~XX.XX~~ 34.97 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 45.5 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 35.4 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2019 MAR -1 AM 11:00

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	7.20	7.28	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE AZTEC, NEW MEXICO 2018 MAR -1 AM 11:00

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller — Date: 02-27-2018

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: **A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ-4046 POD4 (MW-4)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, 51.00 sec
Longitude: -107 deg, 58 min, 34.20 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 52.5 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 38.6 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE AZTEC, NEW MEXICO 08 MAR -1 AM 11:00

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	8.32	8.40	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2018 MAR -1 AM 11:00

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

George A. Madrid — 02-27-2018

Signature of Well Driller — Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ-4046 POD 5 (MW-5)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, 51.60 sec
Longitude: -107 deg, 58 min, 33.00 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 48.0 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 37.6 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2010 MAR -1 AM 11:00

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	7.60	7.68	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2018 MAR -1 AM 11:00

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

02-27-2018
Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ 4046 POD6 (MW-6)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, 50.26 sec
Longitude: -107 deg, 58 min, 35.29 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 58.0 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 38.7 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE AZTEC, NEW MEXICO 2018 MAR -1 AM 11:00

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	9.20	9.26	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2010 MAR -1 AM 11:00

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller — Date: 02-27-2018

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ 4046 POD7 (MW-7)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, ~~XX~~ 47.33 sec
Longitude: -107 deg, 58 min, ~~XX~~ 34.99 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 52.2 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 38.7 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

STATE ENGINEER OFFICE AZTEC, NEW MEXICO 20 MAR -1 AM 11:0

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Type II Cement and 5% bentonite	8.27	8.35	Tremmie	Casing cut 6" below ground surface.

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2010 MAR -1 AM 11:01

III. SIGNATURE:

I, George A. Madrid, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

George A. Madrid — 02-27-2018

Signature of Well Driller — Date

Version: September 8, 2009
Page 2 of 2

Watson, Blaine, OSE

From: Jeff.Walker@ghd.com
Sent: Thursday, March 29, 2018 1:13 PM
To: Watson, Blaine, OSE
Subject: RE: Well Plugging Records; SJ-3885 POD1-POD5 and SJ-4046 POD1-POD8
Attachments: 20180329122939419.pdf

Blaine,
Please see attached corrections to lat/long as called out in your email below. And, yes, SJ4046 MW5 should be 37.6 feet rather than 376.

Please let me know if I can be of further assistance-

Jeff

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ-4046 POD3 (MW-3)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, ~~12.60~~ 48.84 sec
Longitude: -107 deg, 58 min, ~~35.40~~ 34.97 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 45.5 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 35.4 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ 4046 POD7 (MW-7)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, ~~50.18~~ 47.33 sec
Longitude: -107 deg, 58 min, ~~32.28~~ 34.99 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 52.2 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 38.7 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SJ 4046 POD 8 (MW-8)

Well owner: Hilcorp Energy Phone No.: 505-564-0733

Mailing address: PO Box 4700

City: Farmington State: NM Zip code: 87499

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: GEOMAT Inc.

2) New Mexico Well Driller License No.: WD-1762 Expiration Date: 8/30/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Kalvin Padilla

4) Date well plugging began: 2-20-18 Date well plugging concluded: 2-20-18

5) GPS Well Location: Latitude: 36 deg, 45 min, ~~50.18~~ 53.36 sec
Longitude: -107 deg, 58 min, ~~32.28~~ 32.94 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 55.0 ft below ground level (bgl), by the following manner: Water Level Indicator

7) Static water level measured at initiation of plugging: 39.80 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 2-12-18

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

GEOMAT INC.
915 Malta Avenue
Farmington, New Mexico 87401
Tel (505) 327-7928
Fax (505) 326-5721

LETTER OF TRANSMITTAL

To: State Engineer
NMOSE District V Office
100 Gossett Drive, Suite A
Aztec, New Mexico 87410
Attn:

Date: February 27, 2018
Project: Hilcorp Martin 34 No. 2
Project No.: GEOMAT Project 185-2941

We are:	For your:	The following:
___ Transmitting	___ Review	___ Correspondence
___ Returning	X Files	___ Engineering Report
X Submitting	___ Approval	X Plugging Record
	___ Signature	

Copies	Date	Description
1	02-27-18	Well Plugging Records for SJ-4046 POD1-POD8, Hilcorp Martin 34 No. 2

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2018 MAR -1 AM 11:00

Delivery By:

___ Hand Delivery	___ Express Mail	___ Return Receipt
___ First Class Mail	___ Courier Service	
X Regular Mail	___ Other	

GEOMAT Inc.
By: Ina a. Madrid

Distribution: Addressee (1), Jeff Walker, GHD (1)

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
220 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

Invoicing Information
PayKeyRB21200

2. Originating Site:
Lateral 3B-7

3. Location of Material (Street Address, City, State or ULSTR):
UL G Section 3 T29N R11W; 36.75538, -107.97539

4. Source and Description of Waste:
Source: Hydrocarbon impacted soil.
Description: Hydrocarbon impacted soil associated with remediation activities from a natural gas/hydrostatic pipeline leak.
Estimated Volume 50 (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 45 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

CL=148 PL=7

I, Thomas Long (Thomas Long) 4-13-2020, representative for Enterprise Products Operating authorizes IEI, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, (Roger Tinglay), representative for IEI, 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

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * **Permit #: NM 01-0010B**
Address of Facility: **#49 CR 2150 Aztec, New Mexico**

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ La... ☐ ... ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Roger Tinglay TITLE: Trans Coord DATE: 4/13/20

SIGNATURE: (Roger Tinglay) TELEPHONE NO.: 505-632-1782
Surface Waste Management Facility Authorized Agent

4/13

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral 3B-7 Hydrotest Release
Ensolum Project No. 05A1226101

ENSOLUM

Photograph 1 Photograph Description: View of the flow path.	
Photograph 2 Photograph Description: View of the flow path.	
Photograph 3 Photograph Description: View of the final pipeline excavation.	

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral 3B-7 Hydrotest Release
Ensolum Project No. 05A1226101

ENSOLUM

Photograph 4 Photograph Description: View of final excavation after initial restoration.	

ENSOLUM

APPENDIX E

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Lateral 3B-7 Hydrotest 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**
Flowpath Composite Soil Samples													
FP-1	4.14.20	C	0 to 0.25	<0.097	<0.19	<0.19	<0.39	ND	<19	<9.4	<47	ND	<59
FP-2	4.14.20	C	0 to 0.25	<0.093	<0.19	<0.19	<0.37	ND	<19	<9.0	<45	ND	<60
FP-3	4.14.20	C	0 to 0.25	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<9.8	<49	ND	<60
FP-4	4.14.20	C	0 to 0.25	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.0	<45	ND	<60
FP-5	4.14.20	C	0 to 0.25	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.8	<49	ND	<60
FP-6	4.14.20	C	0 to 0.25	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.3	<47	ND	<60
FP-7	4.14.20	C	0 to 0.25	<0.022	<0.044	<0.044	<0.087	ND	<4.4	<9.2	<46	ND	<60
Excavation Composite Soil Samples													
S-1	4.22.20	C	7	<0.020	<0.041	<0.041	<0.082	ND	<4.1	<10	<50	ND	<60
S-2	4.22.20	C	0 to 7	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.3	<47	ND	<60
S-3	4.22.20	C	0 to 7	<0.092	<0.18	<0.18	<0.37	ND	<18	28	<49	28	<60
S-4	4.22.20	C	0 to 7	<0.023	<0.047	<0.047	<0.093	ND	<4.7	29	<50	29	<60
S-5	4.22.20	C	0 to 7	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.7	<49	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

April 20, 2020

Kyle Summers

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

RE: Lateral 3B-7 OrderNo.: 2004673

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/15/2020 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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-1
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:00:00 AM
Lab ID: 2004673-001 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	59		mg/Kg	20	4/15/2020 10:17:26 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/15/2020 11:50:02 AM	51820
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/15/2020 11:50:02 AM	51820
Surr: DNOP	103	55.1-146		%Rec	1	4/15/2020 11:50:02 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	4/15/2020 9:29:42 AM	51772
Surr: BFB	95.1	66.6-105		%Rec	5	4/15/2020 9:29:42 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.097		mg/Kg	5	4/15/2020 9:29:42 AM	51772
Toluene	ND	0.19		mg/Kg	5	4/15/2020 9:29:42 AM	51772
Ethylbenzene	ND	0.19		mg/Kg	5	4/15/2020 9:29:42 AM	51772
Xylenes, Total	ND	0.39		mg/Kg	5	4/15/2020 9:29:42 AM	51772
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	5	4/15/2020 9:29:42 AM	51772

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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-2
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:05:00 AM
Lab ID: 2004673-002 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/15/2020 10:29:50 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/15/2020 11:05:32 AM	51820
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/15/2020 11:05:32 AM	51820
Surr: DNOP	99.3	55.1-146		%Rec	1	4/15/2020 11:05:32 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	4/15/2020 9:53:11 AM	51772
Surr: BFB	96.1	66.6-105		%Rec	5	4/15/2020 9:53:11 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.093		mg/Kg	5	4/15/2020 9:53:11 AM	51772
Toluene	ND	0.19		mg/Kg	5	4/15/2020 9:53:11 AM	51772
Ethylbenzene	ND	0.19		mg/Kg	5	4/15/2020 9:53:11 AM	51772
Xylenes, Total	ND	0.37		mg/Kg	5	4/15/2020 9:53:11 AM	51772
Surr: 4-Bromofluorobenzene	98.7	80-120		%Rec	5	4/15/2020 9:53:11 AM	51772

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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-3
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:10:00 AM
Lab ID: 2004673-003 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/15/2020 10:42:15 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/15/2020 9:47:57 AM	51820
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/15/2020 9:47:57 AM	51820
Surr: DNOP	97.8	55.1-146		%Rec	1	4/15/2020 9:47:57 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/15/2020 10:16:42 AM	51772
Surr: BFB	97.6	66.6-105		%Rec	1	4/15/2020 10:16:42 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/15/2020 10:16:42 AM	51772
Toluene	ND	0.047		mg/Kg	1	4/15/2020 10:16:42 AM	51772
Ethylbenzene	ND	0.047		mg/Kg	1	4/15/2020 10:16:42 AM	51772
Xylenes, Total	ND	0.095		mg/Kg	1	4/15/2020 10:16:42 AM	51772
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/15/2020 10:16:42 AM	51772

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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-4
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:15:00 AM
Lab ID: 2004673-004 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/15/2020 10:54:39 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/15/2020 10:12:17 AM	51820
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/15/2020 10:12:17 AM	51820
Surr: DNOP	97.0	55.1-146		%Rec	1	4/15/2020 10:12:17 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	4/15/2020 10:40:21 AM	51772
Surr: BFB	98.6	66.6-105		%Rec	1	4/15/2020 10:40:21 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	4/15/2020 10:40:21 AM	51772
Toluene	ND	0.040		mg/Kg	1	4/15/2020 10:40:21 AM	51772
Ethylbenzene	ND	0.040		mg/Kg	1	4/15/2020 10:40:21 AM	51772
Xylenes, Total	ND	0.080		mg/Kg	1	4/15/2020 10:40:21 AM	51772
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/15/2020 10:40:21 AM	51772

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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-5
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:20:00 AM
Lab ID: 2004673-005 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/15/2020 11:07:04 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/15/2020 10:36:31 AM	51820
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/15/2020 10:36:31 AM	51820
Surr: DNOP	97.5	55.1-146		%Rec	1	4/15/2020 10:36:31 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	4/15/2020 11:04:09 AM	51772
Surr: BFB	98.6	66.6-105		%Rec	1	4/15/2020 11:04:09 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	4/15/2020 11:04:09 AM	51772
Toluene	ND	0.040		mg/Kg	1	4/15/2020 11:04:09 AM	51772
Ethylbenzene	ND	0.040		mg/Kg	1	4/15/2020 11:04:09 AM	51772
Xylenes, Total	ND	0.080		mg/Kg	1	4/15/2020 11:04:09 AM	51772
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/15/2020 11:04:09 AM	51772

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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-6
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:25:00 AM
Lab ID: 2004673-006 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/15/2020 11:19:29 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/15/2020 11:01:11 AM	51820
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/15/2020 11:01:11 AM	51820
Surr: DNOP	99.2	55.1-146		%Rec	1	4/15/2020 11:01:11 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	4/15/2020 11:27:49 AM	51772
Surr: BFB	97.3	66.6-105		%Rec	1	4/15/2020 11:27:49 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	4/15/2020 11:27:49 AM	51772
Toluene	ND	0.039		mg/Kg	1	4/15/2020 11:27:49 AM	51772
Ethylbenzene	ND	0.039		mg/Kg	1	4/15/2020 11:27:49 AM	51772
Xylenes, Total	ND	0.078		mg/Kg	1	4/15/2020 11:27:49 AM	51772
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	4/15/2020 11:27:49 AM	51772

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 **2004673**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: FP-7
Project: Lateral 3B-7
Collection Date: 4/14/2020 10:30:00 AM
Lab ID: 2004673-007 **Matrix:** SOIL **Received Date:** 4/15/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/15/2020 11:31:54 AM	51821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/15/2020 11:25:33 AM	51820
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/15/2020 11:25:33 AM	51820
Surr: DNOP	98.0	55.1-146		%Rec	1	4/15/2020 11:25:33 AM	51820
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	4/15/2020 11:51:25 AM	51772
Surr: BFB	96.8	66.6-105		%Rec	1	4/15/2020 11:51:25 AM	51772
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	4/15/2020 11:51:25 AM	51772
Toluene	ND	0.044		mg/Kg	1	4/15/2020 11:51:25 AM	51772
Ethylbenzene	ND	0.044		mg/Kg	1	4/15/2020 11:51:25 AM	51772
Xylenes, Total	ND	0.087		mg/Kg	1	4/15/2020 11:51:25 AM	51772
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	4/15/2020 11:51:25 AM	51772

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#: **2004673**

20-Apr-20

Client: ENSOLUM

Project: Lateral 3B-7

Sample ID: **MB-51821** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **51821** RunNo: **68136**

Prep Date: **4/15/2020** Analysis Date: **4/15/2020** SeqNo: **2356599** Units: **mg/Kg**

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

Sample ID: **LCS-51821** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **51821** RunNo: **68136**

Prep Date: **4/15/2020** Analysis Date: **4/15/2020** SeqNo: **2356600** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	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#: **2004673**

20-Apr-20

Client: ENSOLUM

Project: Lateral 3B-7

Sample ID: **MB-51820** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51820** RunNo: **68131**
Prep Date: **4/15/2020** Analysis Date: **4/15/2020** SeqNo: **2355333** 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	6.5		10.00		65.0	55.1	146			

Sample ID: **LCS-51820** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51820** RunNo: **68131**
Prep Date: **4/15/2020** Analysis Date: **4/15/2020** SeqNo: **2355334** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	70	130			
Surr: DNOP	4.1		5.000		82.4	55.1	146			

Sample ID: **2004673-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **FP-1** Batch ID: **51820** RunNo: **68138**
Prep Date: **4/15/2020** Analysis Date: **4/16/2020** SeqNo: **2356497** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	49.85	0	92.2	47.4	136			
Surr: DNOP	4.4		4.985		88.6	55.1	146			

Sample ID: **2004673-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **FP-1** Batch ID: **51820** RunNo: **68138**
Prep Date: **4/15/2020** Analysis Date: **4/16/2020** SeqNo: **2356498** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.9	49.26	0	89.0	47.4	136	4.78	43.4	
Surr: DNOP	4.2		4.926		86.1	55.1	146	0	0	

Sample ID: **MB-51849** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51849** RunNo: **68131**
Prep Date: **4/16/2020** Analysis Date: **4/16/2020** SeqNo: **2356515** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		86.8	55.1	146			

Sample ID: **LCS-51849** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51849** RunNo: **68131**
Prep Date: **4/16/2020** Analysis Date: **4/16/2020** SeqNo: **2356517** 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 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#: **2004673**
20-Apr-20

Client: ENSOLUM
Project: Lateral 3B-7

Sample ID: **LCS-51849** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51849** RunNo: **68131**
Prep Date: **4/16/2020** Analysis Date: **4/16/2020** SeqNo: **2356517** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.7	55.1	146			

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#: **2004673**

20-Apr-20

Client: ENSOLUM

Project: Lateral 3B-7

Sample ID: **mb-51772** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **51772** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356041** 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	940		1000		94.4	66.6	105			

Sample ID: **lcs-51772** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **51772** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356042** 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	90.4	80	120			
Surr: BFB	1000		1000		104	66.6	105			

Sample ID: **mb-51750** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **51750** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356056** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.3	66.6	105			

Sample ID: **lcs-51750** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **51750** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356057** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		110	66.6	105			S

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#: **2004673**

20-Apr-20

Client: ENSOLUM

Project: Lateral 3B-7

Sample ID: **mb-51772** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **51772** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356090** 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	0.98		1.000		97.8	80	120			

Sample ID: **LCS-51772** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **51772** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356091** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.8	80	120			
Toluene	0.91	0.050	1.000	0	91.4	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.4	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID: **mb-51750** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **51750** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356106** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.5	80	120			

Sample ID: **LCS-51750** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **51750** RunNo: **68135**

Prep Date: **4/13/2020** Analysis Date: **4/15/2020** SeqNo: **2356107** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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: **2004673** RcptNo: 1

Received By: **Juan Rojas** **4/15/2020 8:00:00 AM**

Completed By: **Juan Rojas** **4/15/2020 8:10:27 AM**

Reviewed By: JR 4/15/20

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: DAD 4/15/20

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:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good				

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 4-15-20

Project Name: Lateral 3B-7

Project #: 05A1226101

Project Manager: K. Summers

Sampler: C. DApont:

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.5-0.2=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. 2004673	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)
4/14	1000	S	FP-1	1 4oz Jar	Cool	-001	X	X					X			
4/14	1005	S	FP-2		Cool	-002	X	X					X			
4/14	1010	S	FP-3		Cool	-003	X	X					X			
4/14	1015	S	FP-4		Cool	-004	X	X					X			
4/14	1020	S	FP-5		Cool	-005	X	X					X			
4/14	1025	S	FP-6		Cool	-006	X	X					X			
4/14	1030	S	FP-7		Cool	-007	X	X					X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/14/20	1256		Christen Wrede		4/14/20	1256
4/14/20	1727	Christine Woodard		courier	4/15/20	8:00

Remarks: PM Tom Long
Pay Key RB 21200
AFE # N47820
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

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

April 27, 2020

Kyle Summers

Ensolum
606 S Rio Grande Ste A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral 3B 7 OrderNo.: 2004990

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/23/2020 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 **2004990**
Date Reported: **4/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum **Client Sample ID:** S-1
Project: Lateral 3B 7 **Collection Date:** 4/22/2020 12:00:00 PM
Lab ID: 2004990-001 **Matrix:** MEOH (SOIL) **Received Date:** 4/23/2020 8:08:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	4/23/2020 9:47:12 AM	52040
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/23/2020 10:40:51 AM	52038
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/23/2020 10:40:51 AM	52038
Surr: DNOP	107	55.1-146		%Rec	1	4/23/2020 10:40:51 AM	52038
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	4/23/2020 9:15:29 AM	R68362
Surr: BFB	101	66.6-105		%Rec	1	4/23/2020 9:15:29 AM	R68362
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.020		mg/Kg	1	4/23/2020 9:15:29 AM	B68362
Toluene	ND	0.041		mg/Kg	1	4/23/2020 9:15:29 AM	B68362
Ethylbenzene	ND	0.041		mg/Kg	1	4/23/2020 9:15:29 AM	B68362
Xylenes, Total	ND	0.082		mg/Kg	1	4/23/2020 9:15:29 AM	B68362
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	4/23/2020 9:15:29 AM	B68362

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 **2004990**
Date Reported: **4/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum **Client Sample ID:** S-2
Project: Lateral 3B 7 **Collection Date:** 4/22/2020 12:05:00 PM
Lab ID: 2004990-002 **Matrix:** MEOH (SOIL) **Received Date:** 4/23/2020 8:08:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	4/23/2020 9:59:36 AM	52040
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/23/2020 11:04:56 AM	52038
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/23/2020 11:04:56 AM	52038
Surr: DNOP	99.1	55.1-146		%Rec	1	4/23/2020 11:04:56 AM	52038
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	4/23/2020 10:02:53 AM	R68362
Surr: BFB	102	66.6-105		%Rec	1	4/23/2020 10:02:53 AM	R68362
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	4/23/2020 10:02:53 AM	B68362
Toluene	ND	0.043		mg/Kg	1	4/23/2020 10:02:53 AM	B68362
Ethylbenzene	ND	0.043		mg/Kg	1	4/23/2020 10:02:53 AM	B68362
Xylenes, Total	ND	0.086		mg/Kg	1	4/23/2020 10:02:53 AM	B68362
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	4/23/2020 10:02:53 AM	B68362

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 **2004990**
Date Reported: **4/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum **Client Sample ID:** S-3
Project: Lateral 3B 7 **Collection Date:** 4/22/2020 12:10:00 PM
Lab ID: 2004990-003 **Matrix:** MEOH (SOIL) **Received Date:** 4/23/2020 8:08:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	4/23/2020 10:12:00 AM	52040
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	28	9.8		mg/Kg	1	4/23/2020 10:37:14 AM	52038
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/23/2020 10:37:14 AM	52038
Surr: DNOP	99.0	55.1-146		%Rec	1	4/23/2020 10:37:14 AM	52038
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	4/23/2020 10:26:39 AM	R68362
Surr: BFB	101	66.6-105		%Rec	5	4/23/2020 10:26:39 AM	R68362
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.092		mg/Kg	5	4/23/2020 10:26:39 AM	B68362
Toluene	ND	0.18		mg/Kg	5	4/23/2020 10:26:39 AM	B68362
Ethylbenzene	ND	0.18		mg/Kg	5	4/23/2020 10:26:39 AM	B68362
Xylenes, Total	ND	0.37		mg/Kg	5	4/23/2020 10:26:39 AM	B68362
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	5	4/23/2020 10:26:39 AM	B68362

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 **2004990**
Date Reported: **4/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum **Client Sample ID:** S-4
Project: Lateral 3B 7 **Collection Date:** 4/22/2020 12:15:00 PM
Lab ID: 2004990-004 **Matrix:** MEOH (SOIL) **Received Date:** 4/23/2020 8:08:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	4/23/2020 10:49:13 AM	52040
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	29	10		mg/Kg	1	4/23/2020 11:01:39 AM	52038
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/23/2020 11:01:39 AM	52038
Surr: DNOP	97.0	55.1-146		%Rec	1	4/23/2020 11:01:39 AM	52038
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/23/2020 10:50:16 AM	R68362
Surr: BFB	108	66.6-105	S	%Rec	1	4/23/2020 10:50:16 AM	R68362
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	4/23/2020 10:50:16 AM	B68362
Toluene	ND	0.047		mg/Kg	1	4/23/2020 10:50:16 AM	B68362
Ethylbenzene	ND	0.047		mg/Kg	1	4/23/2020 10:50:16 AM	B68362
Xylenes, Total	ND	0.093		mg/Kg	1	4/23/2020 10:50:16 AM	B68362
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	4/23/2020 10:50:16 AM	B68362

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 **2004990**
Date Reported: **4/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ensolum **Client Sample ID:** S-5
Project: Lateral 3B 7 **Collection Date:** 4/22/2020 12:20:00 PM
Lab ID: 2004990-005 **Matrix:** MEOH (SOIL) **Received Date:** 4/23/2020 8:08:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	4/23/2020 11:01:38 AM	52040
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/23/2020 11:26:18 AM	52038
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/23/2020 11:26:18 AM	52038
Surr: DNOP	95.9	55.1-146		%Rec	1	4/23/2020 11:26:18 AM	52038
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	4/23/2020 11:13:51 AM	R68362
Surr: BFB	102	66.6-105		%Rec	1	4/23/2020 11:13:51 AM	R68362
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	4/23/2020 11:13:51 AM	B68362
Toluene	ND	0.043		mg/Kg	1	4/23/2020 11:13:51 AM	B68362
Ethylbenzene	ND	0.043		mg/Kg	1	4/23/2020 11:13:51 AM	B68362
Xylenes, Total	ND	0.086		mg/Kg	1	4/23/2020 11:13:51 AM	B68362
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/23/2020 11:13:51 AM	B68362

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#: **2004990**

27-Apr-20

Client: Ensolum

Project: Lateral 3B 7

Sample ID: **MB-52040** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **52040** RunNo: **68356**

Prep Date: **4/23/2020** Analysis Date: **4/23/2020** SeqNo: **2365671** Units: **mg/Kg**

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

Sample ID: **LCS-52040** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **52040** RunNo: **68356**

Prep Date: **4/23/2020** Analysis Date: **4/23/2020** SeqNo: **2365672** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	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 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#: **2004990**

27-Apr-20

Client: Ensolum

Project: Lateral 3B 7

Sample ID: **LCS-52038** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **52038** RunNo: **68357**
Prep Date: **4/23/2020** Analysis Date: **4/23/2020** SeqNo: **2365184** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	5.0		5.000		99.4	55.1	146			

Sample ID: **MB-52038** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **52038** RunNo: **68357**
Prep Date: **4/23/2020** Analysis Date: **4/23/2020** SeqNo: **2365185** 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		106	55.1	146			

Sample ID: **2004990-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-1** Batch ID: **52038** RunNo: **68358**
Prep Date: **4/23/2020** Analysis Date: **4/23/2020** SeqNo: **2365972** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.8	49.02	4.679	90.2	47.4	136			
Surr: DNOP	4.5		4.902		91.4	55.1	146			

Sample ID: **2004990-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-1** Batch ID: **52038** RunNo: **68358**
Prep Date: **4/23/2020** Analysis Date: **4/23/2020** SeqNo: **2365973** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.5	47.57	4.679	91.0	47.4	136	1.91	43.4	
Surr: DNOP	4.4		4.757		91.6	55.1	146	0	0	

Sample ID: **LCS-52025** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **52025** RunNo: **68357**
Prep Date: **4/22/2020** Analysis Date: **4/23/2020** SeqNo: **2366142** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.3		5.000		125	55.1	146			

Sample ID: **MB-52025** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **52025** RunNo: **68357**
Prep Date: **4/22/2020** Analysis Date: **4/23/2020** SeqNo: **2366143** 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 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#: **2004990**
27-Apr-20

Client: Ensolum
Project: Lateral 3B 7

Sample ID: **MB-52025** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **52025** RunNo: **68357**
Prep Date: **4/22/2020** Analysis Date: **4/23/2020** SeqNo: **2366143** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		129	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#: **2004990**

27-Apr-20

Client: Ensolum

Project: Lateral 3B 7

Sample ID: **2004990-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **R68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365824** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.1	20.48	0	98.9	80	120			
Surr: BFB	930		819.0		114	66.6	105			S

Sample ID: **2004990-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **R68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365825** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.1	20.48	0	98.0	80	120	0.894	20	
Surr: BFB	930		819.0		114	66.6	105	0	0	S

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365828** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.3	80	120			
Surr: BFB	1100		1000		111	66.6	105			S

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365829** 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	1000		1000		103	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#: **2004990**
27-Apr-20

Client: Ensolum
Project: Lateral 3B 7

Sample ID: **2004990-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-2**	Batch ID: **B68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365916** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.022	0.8643	0	91.2	78.5	119			
Toluene	0.81	0.043	0.8643	0.01132	92.9	75.7	123			
Ethylbenzene	0.83	0.043	0.8643	0	95.8	74.3	126			
Xylenes, Total	2.5	0.086	2.593	0.01694	95.5	72.9	130			
Surr: 4-Bromofluorobenzene	0.92		0.8643		107	80	120			

Sample ID: **2004990-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-2**	Batch ID: **B68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365918** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.022	0.8643	0	91.2	78.5	119	0.0877	20	
Toluene	0.81	0.043	0.8643	0.01132	92.4	75.7	123	0.543	20	
Ethylbenzene	0.82	0.043	0.8643	0	95.4	74.3	126	0.439	20	
Xylenes, Total	2.5	0.086	2.593	0.01694	94.9	72.9	130	0.581	20	
Surr: 4-Bromofluorobenzene	0.95		0.8643		109	80	120	0	0	

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365928** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.7	80	120			
Toluene	0.91	0.050	1.000	0	90.7	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.6	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B68362**	RunNo: **68362**
Prep Date:	Analysis Date: **4/23/2020**	SeqNo: **2365929** 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	1.0		1.000		101	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: **2004990** RcptNo: **1**

Received By: **Desiree Dominguez** **4/23/2020 8:08:00 AM** DD

Completed By: **Desiree Dominguez** **4/23/2020 8:09:03 AM** DD

Reviewed By: DAD 4/23/20

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: JR 4/23/20

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:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes	y		

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Suit A

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: ~~100~~ ~~80~~ Same Day

☐ Standard ☒ Rush 4-23-20

Project Name: Lateral 3B-7

Project #: 05A1226101

Project Manager: K. Summers

Sampler: C DAponti

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.1-0.0=3.1 (°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. 2004990	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)						
4/22	1200	S	S-1	1 4oz Jar	Cool	-001	X	X					X									
4/22	1205	S	S-2		Cool	-002	X	X					X									
4/22	1210	S	S-3		Cool	-003	X	X					X									
4/22	1215	S	S-4		Cool	-004	X	X					X									
4/22	1220	S	S-5		Cool	-005	X	X					X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/22	1442	[signature]	Christine Walters		4/22/20	1442
4/22/20	1811	Christine Walters	[initials]	courier	4/23/20	8:08

Remarks: PM - Tom Long

Key - Key - RB21200

AFE# N47820

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.

ENSOLUM

APPENDIX G

Regulatory Correspondence

From: Long, Thomas
To: "Smith, Cory, EMNRD (Cory.Smith@state.nm.us)"
Cc: Stone, Brian
Subject: FW: Lateral 3B-7 Hydro Test Release - UL G Section 3 T29N R11W; 36.75538, -107.97539
Date: Thursday, April 23, 2020 2:48:00 PM
Attachments: Site Drawing 3.jpg
Lateral 3B 7.pdf

Cory,

Please find the attached site sketch and lab report for the Lateral 3B-7 excavation sampling. All samples results are below the NMOCD Tier I remediation standards. Entperise will backfill the excavation with clean imported fill 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

Enterprise Products

From: Long, Thomas
Sent: Tuesday, April 21, 2020 12:19 PM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Lateral 3B-7 Hydro Test Release - UL G Section 3 T29N R11W; 36.75538, -107.97539

Cory,

This email is a notification that Entperise will be collecting soil samples for laboratory analysis at the Lateral 3B-7 excavation tomorrow, April 22, 2020 at 12:00 p.m. 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, April 16, 2020 10:04 AM
To: 'Smith, Cory, EMNRD' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Lateral 3B-7 Hydro Test Release - UL G Section 3 T29N R11W; 36.75538, -107.97539

Cory,

Please find the attached site sketch and lab report for the Lateral 3B-7 flow path sampling. All sample results are below the NMOCD Tier I soil remediation standard. I will keep you informed as to when we excavate the pipeline for the repairs and the subsequent sampling for the excavation. 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: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, April 14, 2020 8:26 AM
To: Long, Thomas <tjlong@eprod.com>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Lateral 3B-7 Hydro Test Release - UL G Section 3 T29N R11W; 36.75538, -107.97539

Tom,

Thank you for the notice, due to the proximity of the public.. OCD denies Enterprise request to increase sampling size.

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: Monday, April 13, 2020 2:16 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] FW: Lateral 3B-7 Hydro Test Release - UL G Section 3 T29N R11W; 36.75538, -107.97539

Cory,

This email is a notification that Enterprise will be collecting soil samples for laboratory analysis at the Lateral 3B-7 release site tomorrow Tuesday, April 14, 2020 at 10:00 a.m. In addition, Enterprise is requesting a variance from the 200 square foot sample interval to an approximately 350 square foot sample interval for the surface flow path area. I have attached a site sketch for reference. 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
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From: Long, Thomas
Sent: Tuesday, April 7, 2020 5:24 PM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>; Waszut, Michael <MGWASZUT@eprod.com>
Subject: Lateral 3B-7 Hydro Test Release - UL G Section 3 T29N R11W; 36.75538, -107.97539

Cory,

This is a follow up to our phone conversation earlier today. Enterprise had a release of hydro-test water (potable water) during pressure testing of the Lateral 3B-7 pipeline this afternoon. The release

water flowed approximately 600 feet south from the source. The release is located at UL G Section 3 T29N R11W; 36.75538, -107.97539. I have attached a map and photos for reference. The red/pink color is red dye at the proper concentration added to the potable water. I don't have an accurate volume yet, but it is greater than 25 barrels. Hydro testing activities were terminated and the source mitigated. I will keep you inform as to when sampling or remediation activities will be scheduled. If you have any questions, please call or email.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
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CONDITIONS

Action 11403

CONDITIONS

Operator:	OGRID:
Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	241602
	Action Number: 11403
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/20/2022