ENSOLUM

CLOSURE REPORT

Property:

Florence #92 (04/13/23)
Unit Letter H, S31 T30N R9W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2310326139

May 25, 2023

Ensolum Project No. 05A1226237

Prepared for:

Enterprise Field Services, LLC
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1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Florence #92 (04/13/23) (Site)
NM EMNRD OCD Incident ID No.	NAPP2310326139
Location:	36.770647° North, 107.816134° West Unit Letter H, Section 31, Township 30 North, Range 9 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico (NM) Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On April 5, 2023, a third party discovered a release on the Florence #92 pipeline. Enterprise personnel subsequently isolated and locked the pipeline out of service. On April 12, 2023, Enterprise initiated activities to repair the pipeline and remediate potential petroleum hydrocarbon impact. On April 13, 2023, Enterprise determined the release was "reportable" due to the estimated volume of impacted soil. The NM EMNRD OCD was subsequently notified.

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

1.2 Project Objective

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

2.0 CLOSURE CRITERIA

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

- The NM Office of the State Engineer (OSE) tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). Numerous PODs with recorded depths to water were identified in the same Public Land Survey System (PLSS) section as the Site, and in the adjacent PLSS sections (**Figure A**, **Appendix B**). The average depth to water for all the identified PODs is 22 feet below grade surface (bgs). The closest PODs (SJ-04353 POD1 through POD6) are approximately 0.70 miles northeast of the Site and approximately 77 feet higher in elevation than the Site. The average recorded depth to water for these PODs is 25 feet bgs.

- Numerous cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the same PLSS section as the Site and in adjacent sections. The CPWs are depicted on **Figure B** (**Appendix B**). The three closest CPWs are located near the Mansfield #11, Mansfield #7, and New Mexico Com #1 well locations. Documentation for the cathodic protection well located near the Mansfield #11 well location indicates a depth to water of approximately 60 feet. This cathodic protection well is located approximately 0.75 miles northeast of the Site and is 57 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Mansfield #7 well location indicates a depth to water of approximately 100 feet bgs. This cathodic protection well is located approximately 0.85 miles northeast of the Site and is 171 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the New Mexico Com #1 well location indicates a depth to water of approximately 40 feet bgs. This cathodic protection well is located approximately 0.85 miles southwest of the Site and is 29 feet higher in elevation than the Site.

- The Site is located within 300 feet of a NM EMNRD OCD-defined continuously flowing watercourse or significant watercourse (**Figure C**, **Appendix B**).

- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.

- The Site is not located within 300 feet of a permanent residence, school, hospital, institution, or church (**Figure D**, **Appendix B**).

- No springs, or private domestic freshwater wells used by less than five households for domestic or stock watering purposes were identified within 500 feet of the Site (**Figure E**, **Appendix B**).

- No freshwater wells or springs were identified within 1,000 feet of the Site (**Figure E**, **Appendix B**).

- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3.

- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is not within 300 feet of a wetland (**Figure F**, **Appendix B**).

- Based on information identified in the NM Mining and Minerals Division's Geographic Information System (GIS) Maps and Mine Data database, the Site is not within an area overlying a subsurface mine (**Figure G**, **Appendix B**).

- The Site is not located within an unstable area per Paragraph (6) of Subsection U of 19.15.2.7 NMAC.

- Based on information provided by the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not within a 100-year floodplain (**Figure H**, **Appendix B**).

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

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

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

3.0 SOIL REMEDIATION ACTIVITIES

On April 12, 2023, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities, Sierra Oilfield Services, Inc, provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 23 feet long and 15 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 10 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of silty sand underlain by sandstone.

Approximately 184 cubic yards (yd^3) of petroleum hydrocarbon-affected soils and 55 barrels (bbls) of hydro-excavation soil cuttings and water were transported to the Envirotech, Inc., (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix C**. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

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

4.0 SOIL SAMPLING PROGRAM

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

Ensolum's soil sampling program included the collection of eight composite soil samples (S-1 through S-8) from the excavation for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft^2) sample area or less per guidelines outlined in Section D of 19.15.29.12 NMAC. The excavator bucket was utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event

On April 14, 2023, sampling was performed at the Site. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil samples S-1 (10') and S-2 (10') were collected from the floor of the excavation. Composite soil samples S-3 (0' to 10'), S-4 (0' to 10'), S-5 (0' to 10'), S-6 (0' to 10'), S-7 (0' to 10'), and S-8 (0' to 10') were collected from the walls of the excavation.

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

5.0 SOIL LABORATORY ANALYTICAL METHODS

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

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

6.0 SOIL DATA EVALUATION

Ensolum compared the benzene, BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1 through S-8) to the applicable NM EMNRD OCD closure criteria. The laboratory analytical results are summarized in **Table 1** (**Appendix F**).

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

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

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

- The laboratory analytical result for composite soil sample S-2 indicates a chloride concentration of 65 mg/kg, which is less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for all other composite soil samples indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

7.0 RECLAMATION AND REVEGETATION

The excavation was backfilled with imported fill and then contoured to the surrounding topography.

8.0 FINDINGS AND RECOMMENDATION

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

- Approximately 184 yd^3 of petroleum hydrocarbon-affected soils and 55 bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm for disposal/remediation. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

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

9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

9.1 Standard of Care

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

9.2 Limitations

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

9.3 Reliance

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

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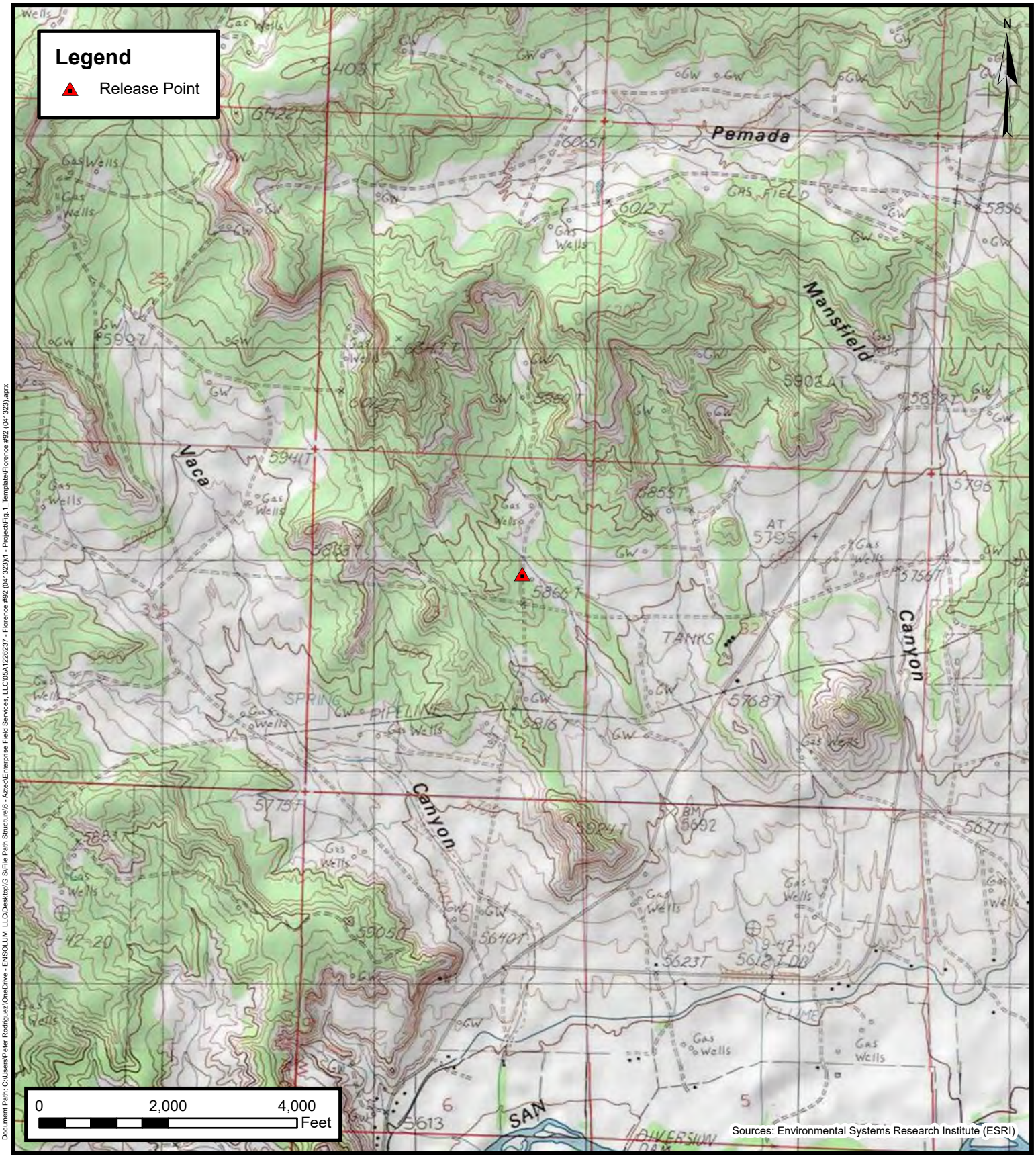
APPENDIX A

Figures



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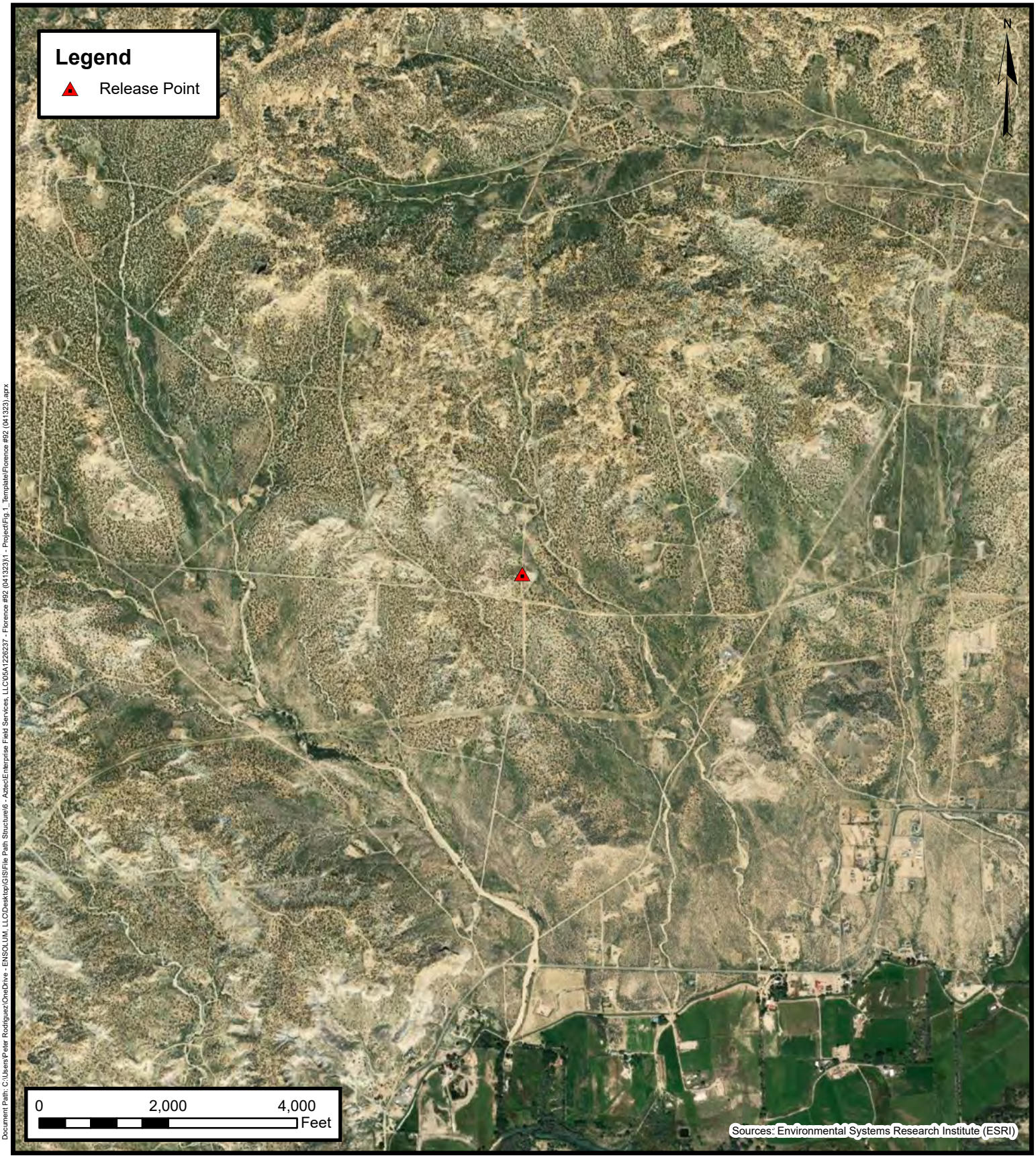
Environmental, Engineering and Hydrogeologic Consultants

Topographic Map

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
1



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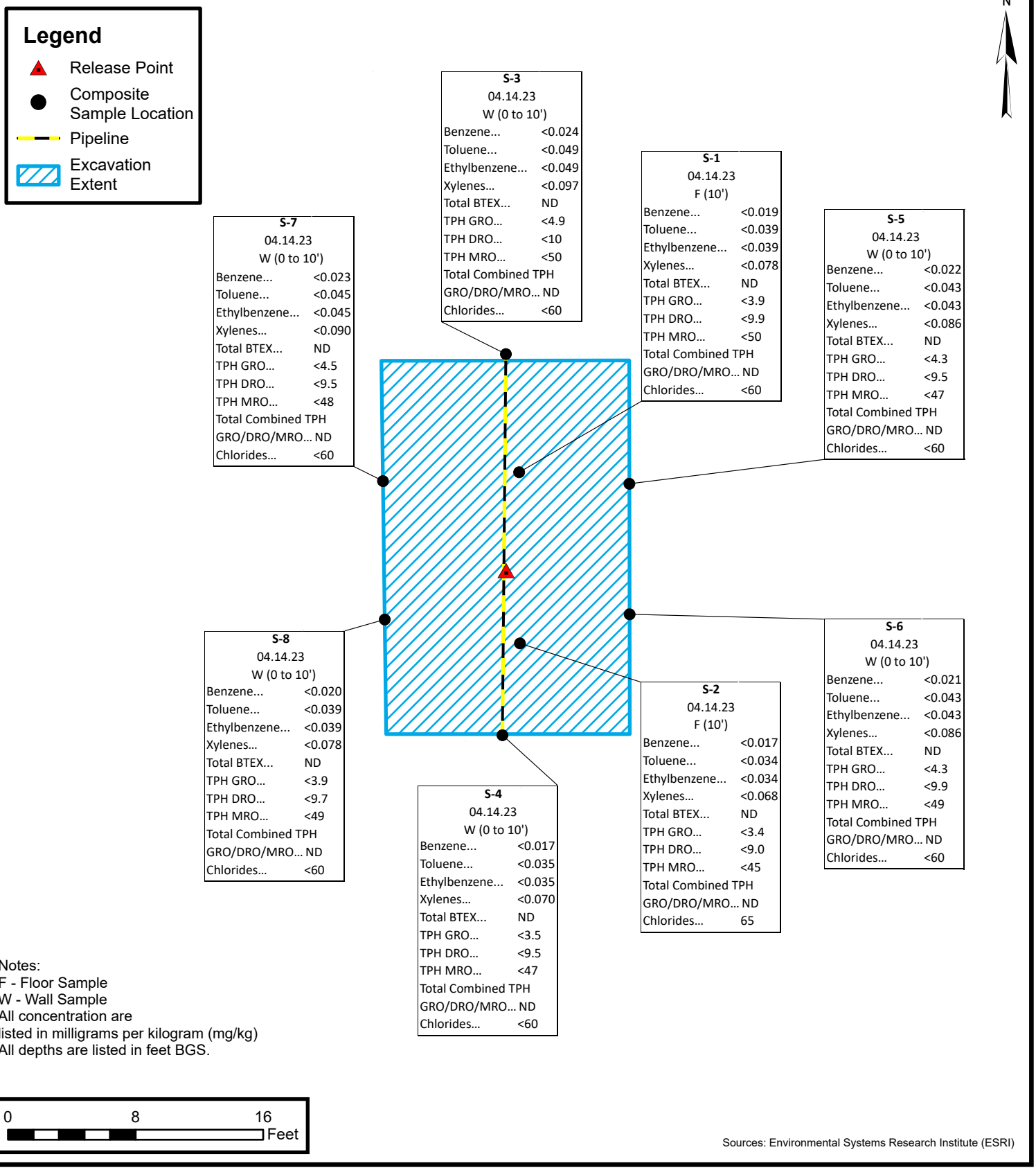
Site Vicinity Map

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
2



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Site Map with Soil Analytical Results

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
3

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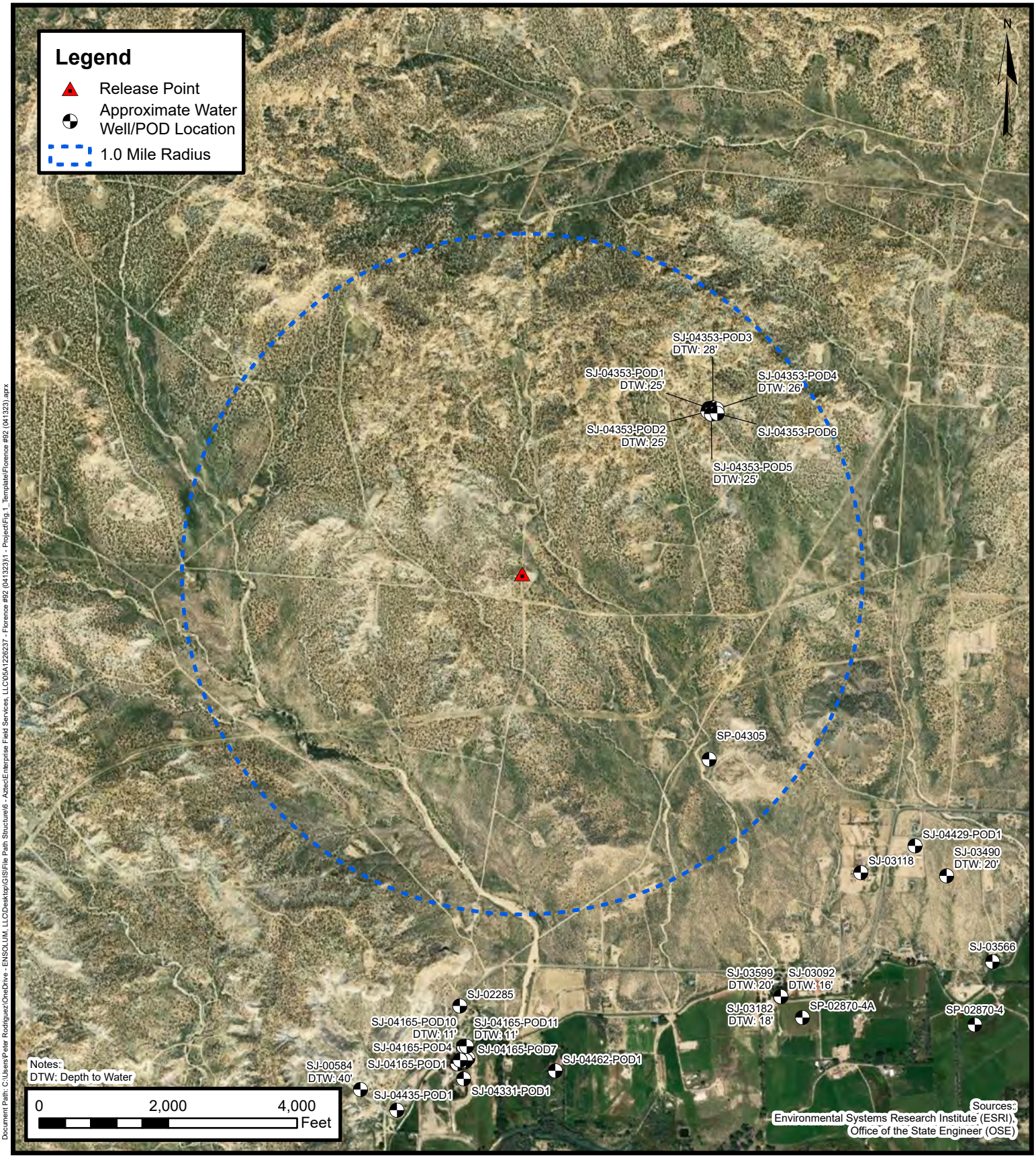
APPENDIX B

Siting Figures and Documentation



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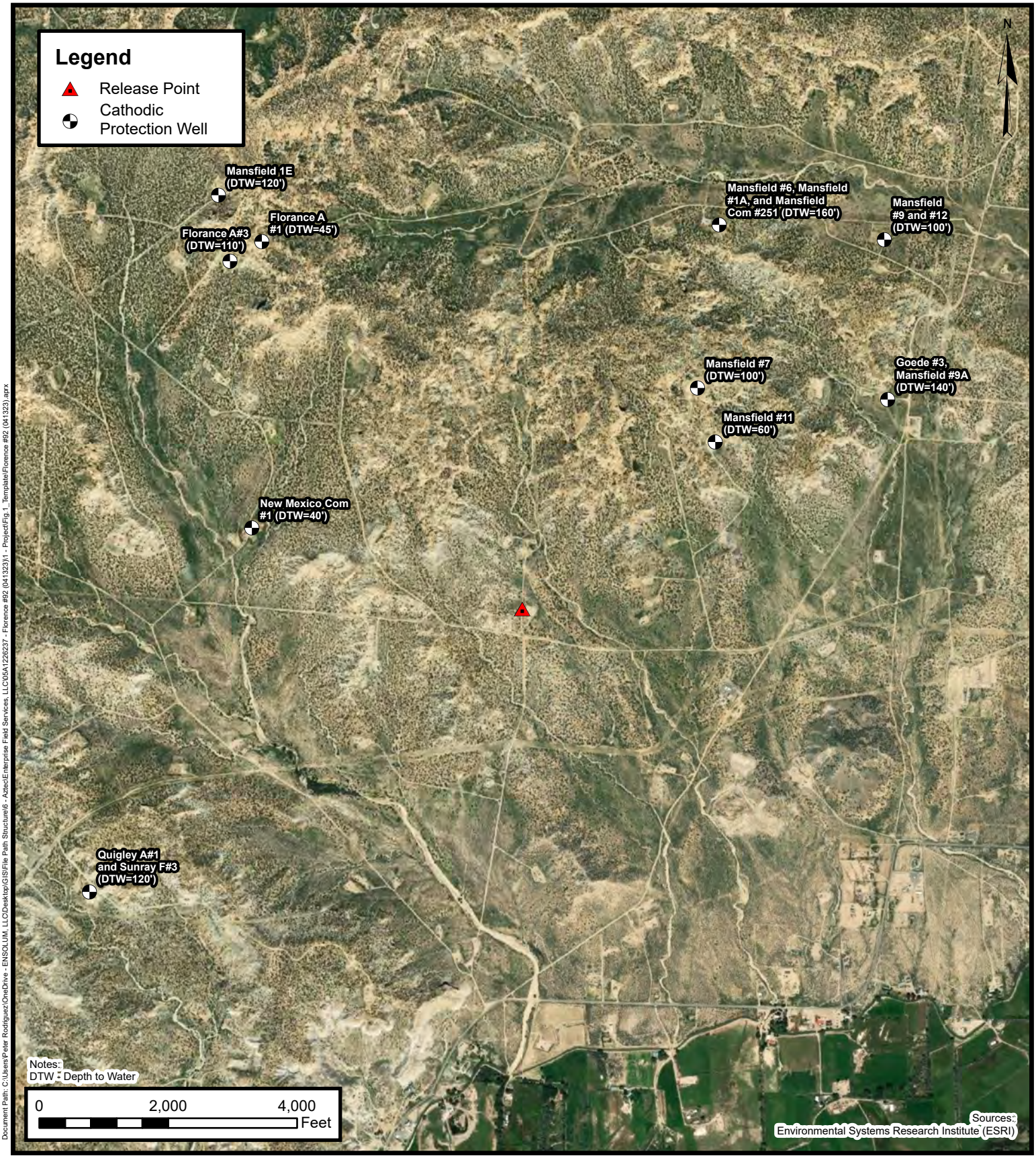
1.0 Mile Radius Water Well/ POD Location Map

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE

A



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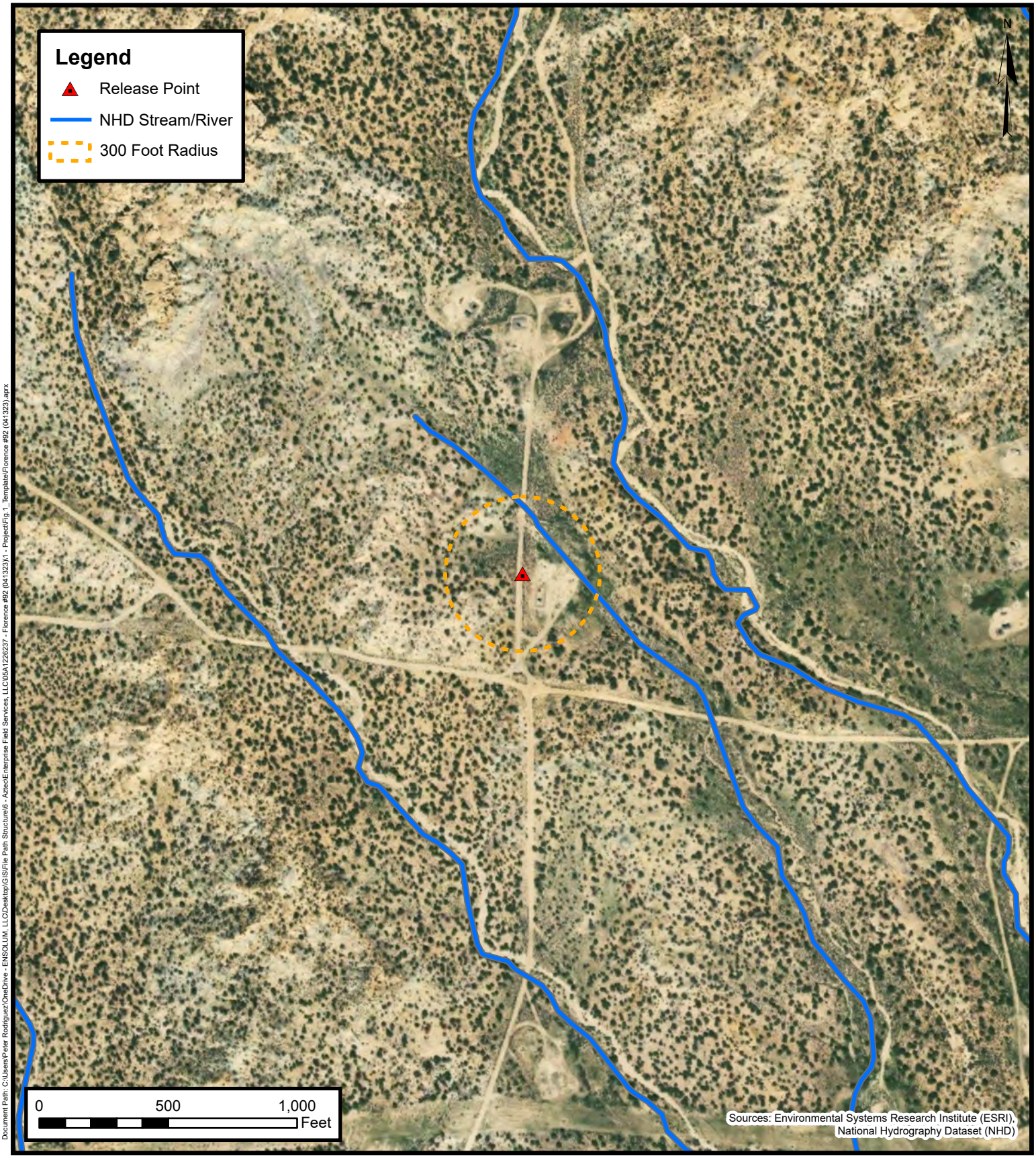
Cathodic Protection Well Recorded Depth to Water

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
B



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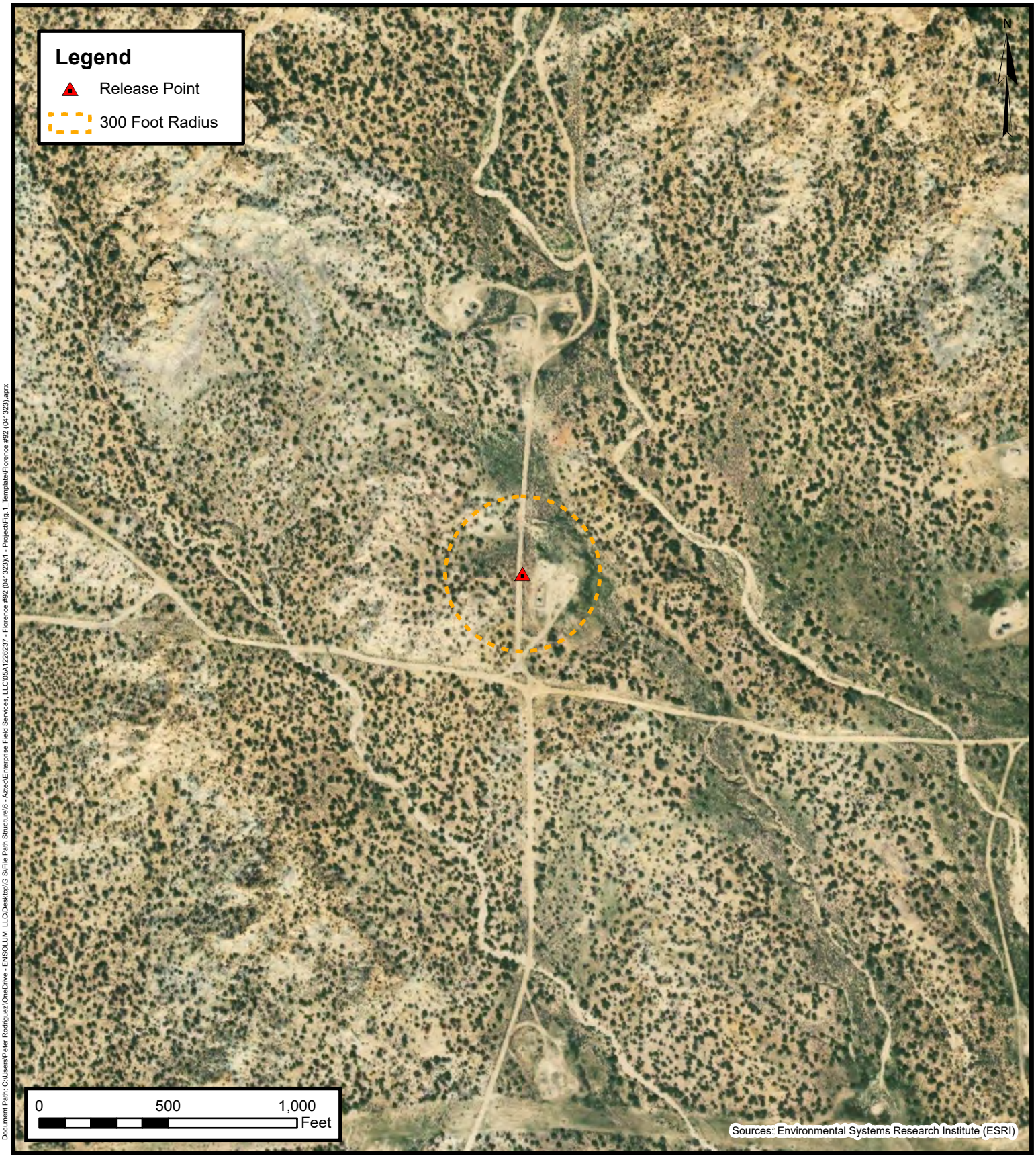
300 Foot Radius Watercourse and Drainage Identification

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
C



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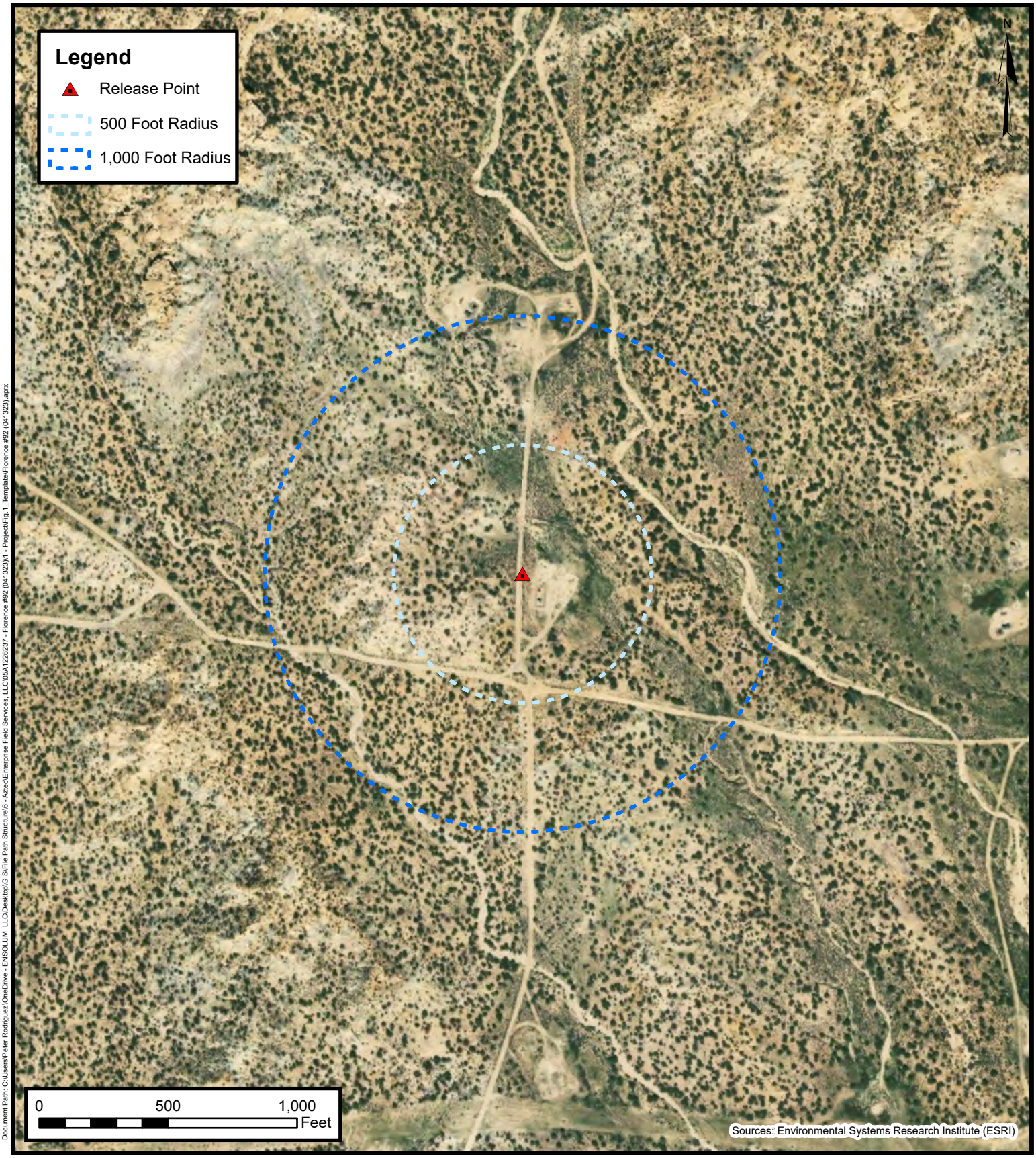
300 Foot Radius Occupied Structure Identification

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
D



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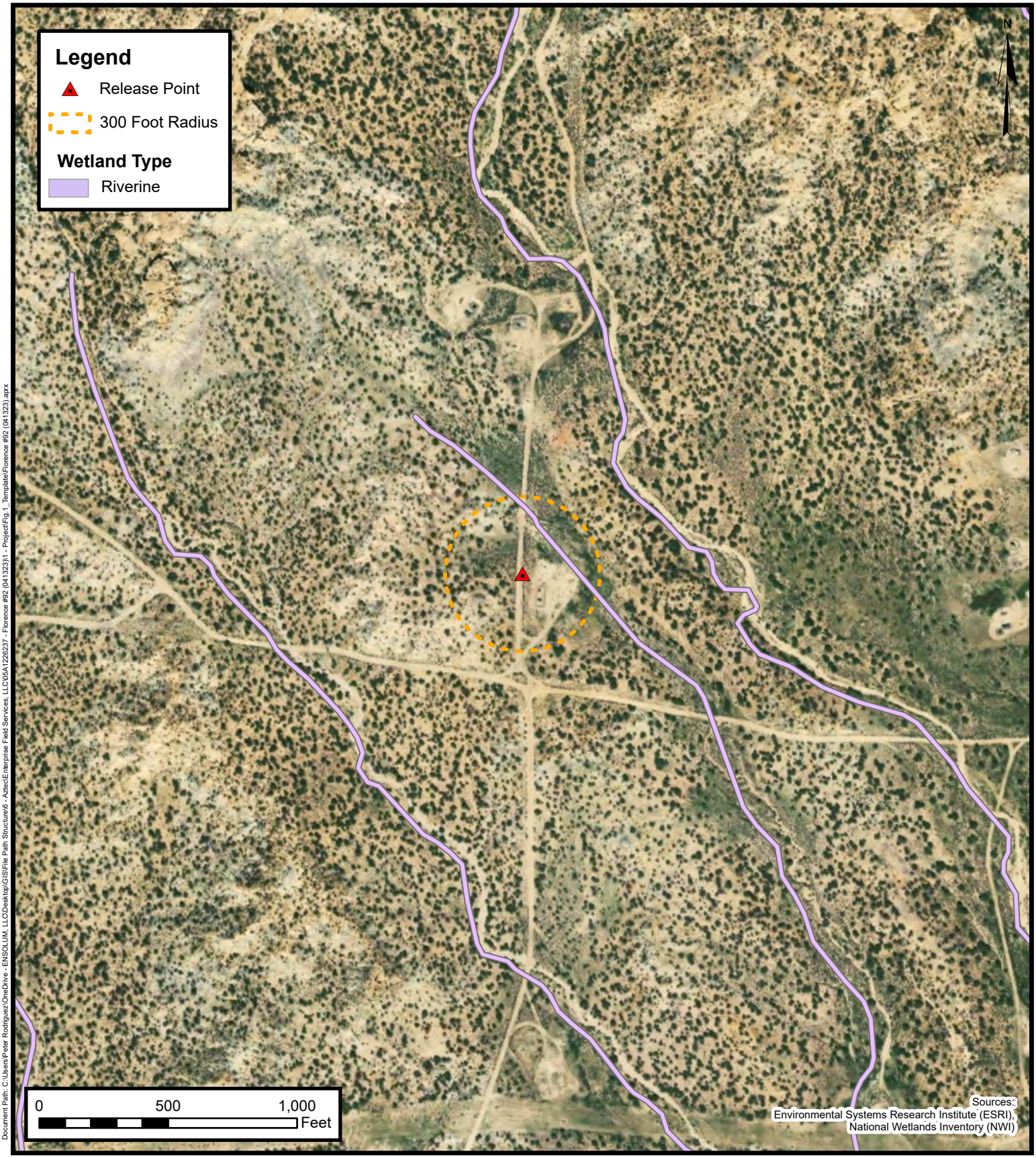
Water Well and Natural Spring Location

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
E



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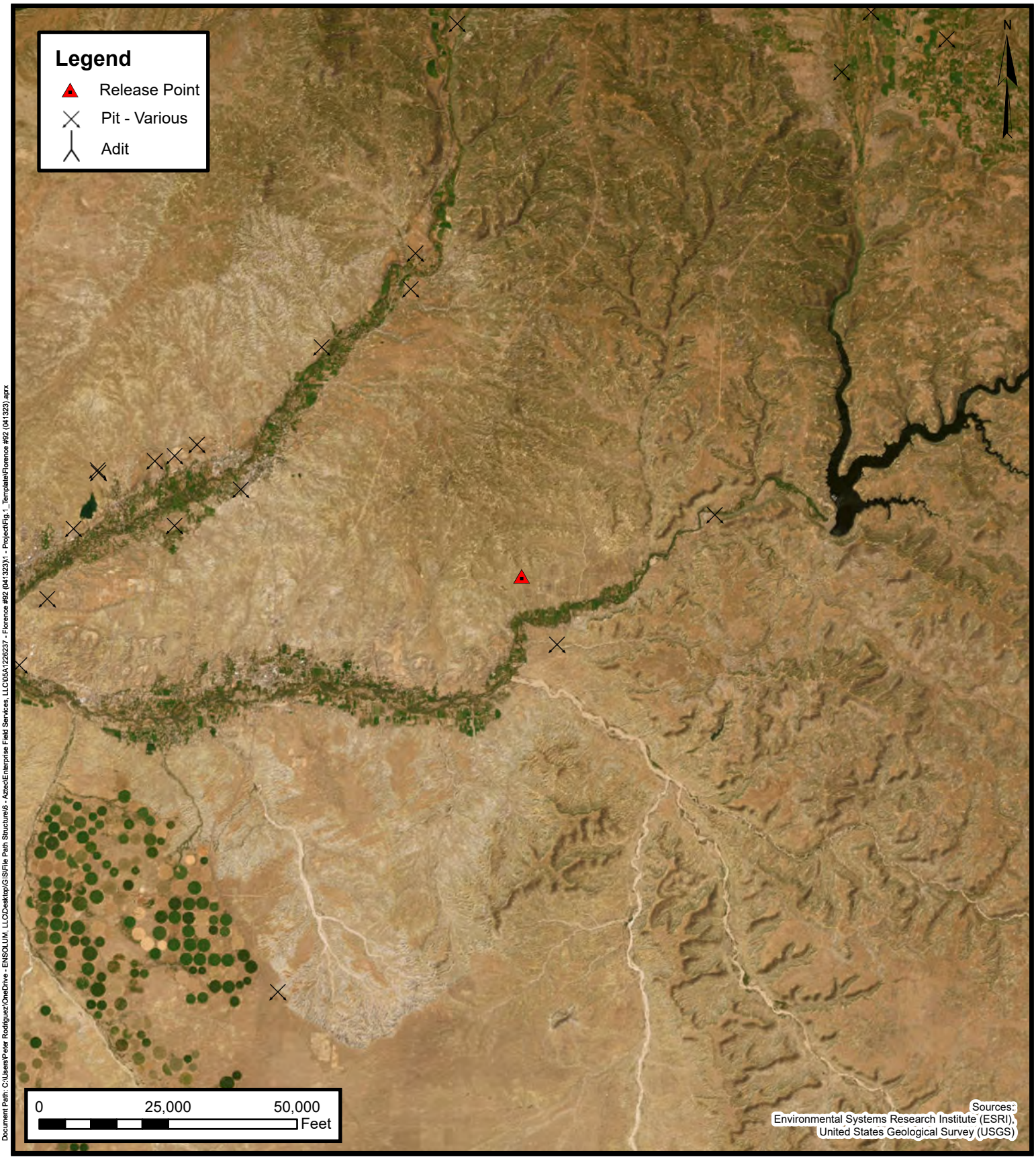
Wetlands

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
F



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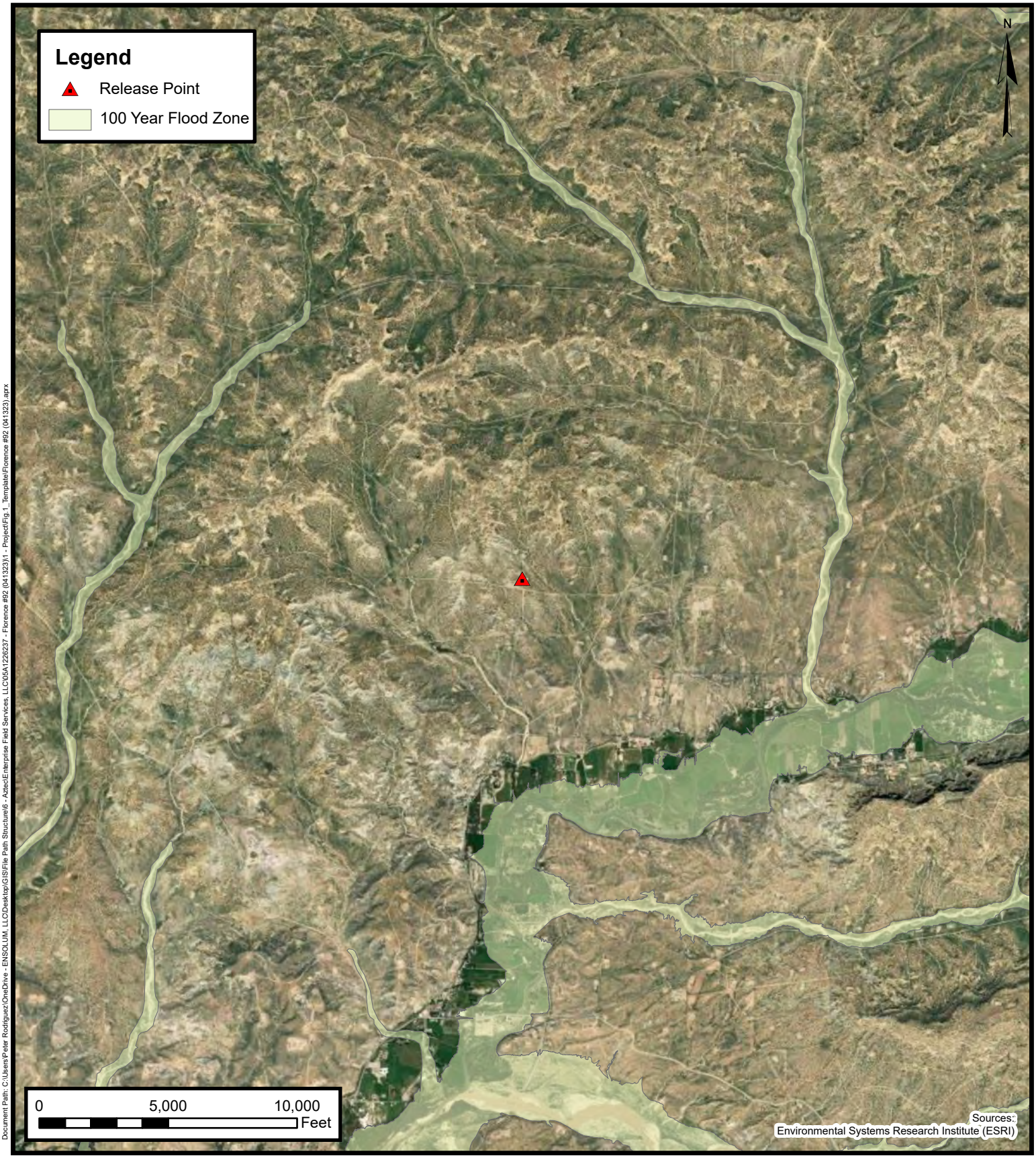
Mines, Mills, and Quarries

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

FIGURE
G



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ENSOLUM
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100-Year Flood Plain Map

Enterprise Field Services, LLC
Florence #92 (04/13/23)
Project Number: 05A1226237
Unit Letter H, S31 T30N R9W, San Juan County, New Mexico
36.770647, -107.816134

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 Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 04353 POD1	SJ	SJ	4	3	29	30N	09W		249534	4073912	28	25	3
SJ 04353 POD2	SJ	SJ	4	3	29	30N	09W		249530	4073898	28	25	3
SJ 04353 POD3	SJ	SJ	4	3	29	30N	09W		249553	4073913	32	28	4
SJ 04353 POD4	SJ	SJ	4	3	29	30N	09W		249572	4073908	29	26	3
SJ 04353 POD5	SJ	SJ	4	3	29	30N	09W		249547	4073885	30	25	5
SJ 04353 POD6	SJ	SJ	4	3	29	30N	09W		249574	4073889			

Average Depth to Water: **25 feet**

Minimum Depth: **25 feet**

Maximum Depth: **28 feet**

Record Count: 6

PLSS Search:

Section(s): 31, 29, 30, 32 **Township:** 30N **Range:** 09W

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 00584	SJM2	SJ		4	3	06	29N	09W	247886	4070692*	143	40	103
SJ 03092	SJM2	SJ	1	1	4	05	29N	09W	249875	4071132*	40	16	24
SJ 03118	SJM2	SJ	3	2	2	05	29N	09W	250253	4071718*	250		
SJ 03182	SJM2	SJ	1	1	4	05	29N	09W	249875	4071132*	42	18	24
SJ 03599	SJM2	SJ	1	1	4	05	29N	09W	249875	4071132*	42	20	22
SJ 04165 POD10	SJ	SJ		1	4	06	29N	09W	248375	4070897	23	11	12
SJ 04165 POD11	SJ	SJ		1	4	06	29N	09W	248389	4070896	23	11	12
SJ 04429 POD1	SJM2	SJ	2	2	2	05	29N	09W	250510	4071844	80		
SJ 04462 POD1	SJM2	SJ	2	4	4	06	29N	09W	248808	4070780	50		

Average Depth to Water: **19 feet**
Minimum Depth: **11 feet**
Maximum Depth: **40 feet**

Record Count: 9

PLSS Search:

Section(s): 6, 5 **Township:** 29N **Range:** 09W

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

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

No records found.

PLSS Search:

Section(s): 1 **Township:** 29N **Range:** 10W

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

No records found.

PLSS Search:

Section(s): 36, 25 **Township:** 30N **Range:** 10W

GOEDE #3 - 30-045-09140 4649
MANSFIELD #9A - 30-045-21725

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

Operator MERIDIAN OIL Location: Unit SE Sec. 29 Twp 30 Rng 9

Name of Well/Wells or Pipeline Serviced GOEDE #3, MANSFIELD #9A

cps 57w

Elevation 5854' Completion Date 6/13/72 Total Depth 320' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 140'

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 4700 lbs.

Depths anodes placed: 285', 275', 265', 245', 235', 225', 215', 185', 175'

Depths vent pipes placed: N/A

Vent pipe perforations: 150'

Remarks: ~~cgb~~ #2

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

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

El Paso Natural Gas Company
Form 7-238 (Rev. 1-69)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐

Completion Date 6-13-72

Well Name	Location	CPS No.
Gocde #3	SE 29-30-9	57W

Type & Size Bit Used	Work Order No.
6 3/4"	184-5K344-50-2

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
320		4700 Est.		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	285	275	265	255	245	235	225	215	185	175
Anode Output (Amps)	4.2	4.7	4.5	4.4	5.2	4.5	4.3	3.7	3.6	4.5

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

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.5	Amps 11.5	Ohms 1.0Ω		

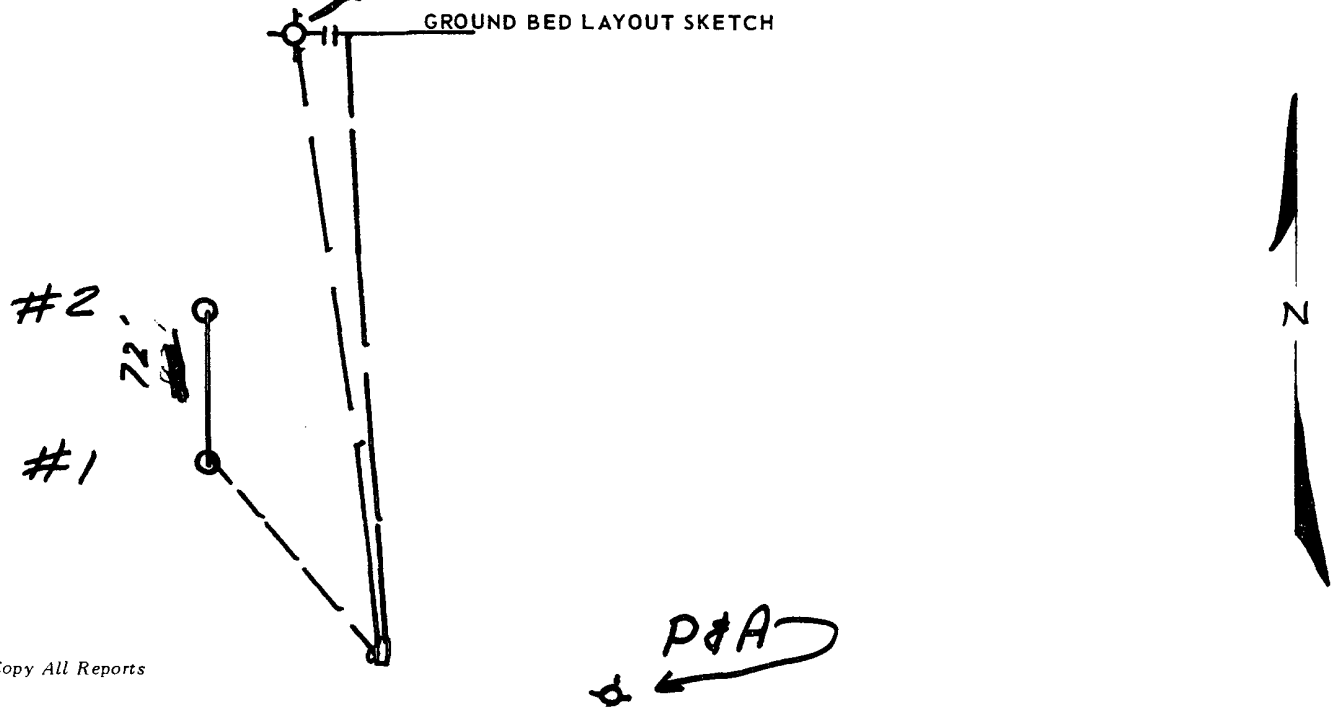
Remarks: Driller Said Water at 140' - Water Standing at 60'
Vent Perforated 150' Hole Caved, Moved Rig Back & Drilled Out With Mud.
Pump 325 Shovels Coke - to 6'

All Construction Completed

Paulek - Daniels
(Signature)

Re Drill New Well

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

C.P.S.# 57W

DAILY DRILLING REPORT

LEASE Hoede WELL NO# 3 CONTRACTOR morrow RIG NO. REPORT NO. DATE 6-12 1972

MORNING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	30	loose sand		
30	140	dry sand & shale		
140	160	shet sand		
160	190	shale		

NO. DC ____ SIZE ____ LENG. ____

BIT NO. NO. DC ____ SIZE ____ LENG. ____

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.	

FROM	TO	TIME BREAKDOWN

REMARKS –

DAYLIGHT

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
190	210	sand		
210	290	shale		
290	320	sand		

NO. DC ____ SIZE ____ LENG. ____

BIT NO. NO. DC ____ SIZE ____ LENG. ____

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.	

FROM	TO	TIME BREAKDOWN

REMARKS –

EVENING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.

NO. DC ____ SIZE ____ LENG. ____

BIT NO. NO. DC ____ SIZE ____ LENG. ____

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.	

FROM	TO	TIME BREAKDOWN

REMARKS –

340'

SIGNED: Toolpusher Joe Morrow Company Supervisor

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Date: 6-12-72
By: _____

Goede #3 57W 6-13-72

125	4.15	300	2.4						Driller said water
30	4.0	304	BOTTOM						@ 140'
	3.2								water standing @ 60'
40	2.75								Vent Perf. 150'
	2.0								
50	2.2								
	2.25				Depth	Log	Water	Coke	
60	2.25			1	285	4.0	3.4	4.2	
	3.1			2	275	4.3	3.9	4.7	
70	3.1			3	265	3.9	3.6	4.5	
(10)	3.9			4	255	4.1	3.5	4.4	
80	4.1			5	245	4.8	4.3	5.2	
(9)	3.75			6	235	4.0	3.7	4.5	
90	3.0			7	225	3.75	3.6	4.3	
	1.5			8	215	3.2	2.9	3.7	
100	2.35			9	185	3.75	2.9	3.6	
	2.2			10	175	3.9	3.5	4.5	
10	2.25					11.5V	11.5A	1.0-2	
(8)	3.2					Hole Caved - Moved Rig Back			
20	3.45					& Drilled out with Mud			
(7)	3.75								
30	4.2					Pumped 325 Shovels to 6'			
(6)	4.0					slurry			
40	4.3								
(5)	4.8								
50	4.4								
(4)	4.1								
60	3.9								
(3)	3.8								
70	4.35								
(2)	4.35								
80	4.5								
(1)	4.0								
90	3.4								
	2.6								

MW		gals/mol
16	C_1	6.4
30	C_2	9.56
44	C_3	10.42
58	IC_4	12.38
"	NC_4	11.93
72	IC_5	13.85
"	NC_5	13.71
86	IC_6	15.50
"	C_6	15.57
100	IC_7	17.2
"	C_7	17.46
114	C_8	19.38
28	$C_2^=$	9.64
42	$C_3^=$	9.67

MISC.

MW		gals/mol
44	CO_2	6.38
34	H_2S	5.17
28	N_2	4.16
2	H_2	3.38

6 - 30-045-09228
1A - 30-045-21726
4567

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

Operator MERIDIAN OIL Location: Unit NW Sec. 29 Twp 30 Rng 9

Name of Well/Wells or Pipeline Serviced MANSFIELD #6, MANSFIELD #1A,
MANSFIELD COM #251 cps 65w

Elevation 6027' Completion Date 10/13/69 Total Depth 310' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 160'

RECEIVED
MAY 31 1991
OIL CON. DIV
DIST. 3

Depths gas encountered: N/A

Type & amount of coke breeze used: 4500 lbs.

Depths anodes placed: 272', 262', 252', 227', 221', 209', 203', 197'

Depths vent pipes placed: 262' OF 3/4" HOSE

Vent pipe perforations: 262'

Remarks: gb #2 EPOXY POURED ABOVE SHRINK SLEEVE

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

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

El Paso Natural Gas Company
Form 7-238 (Rev. 1-69)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

5 1/8 # 132 = 68
5" # 78743 = 192

Drilling Log (Attach Hereto). ☐

No. 2 Gnd Bed

Completion Date 10-13-69

Well Name	Location	CPS No.
Mansfield #6	NKI 29-30-9	65W

Type & Size Bit Used	Work Order No.
7 7/8 # 10434 = 200, 7 7/8 # 28104 = 110	184-54224-50-20

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
310	29 Hrs	4500 (45 Sacks)	0	2

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	272	262	252	227	221	209	203	197		
Anode Output (Amps)	2.7	3.2	3.2	2.7	3.1	3.0	3.9	4.2		

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

Total Circuit Resistance Volts	Amps	Ohms	No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
12.5	10.5	1.25	2158	0

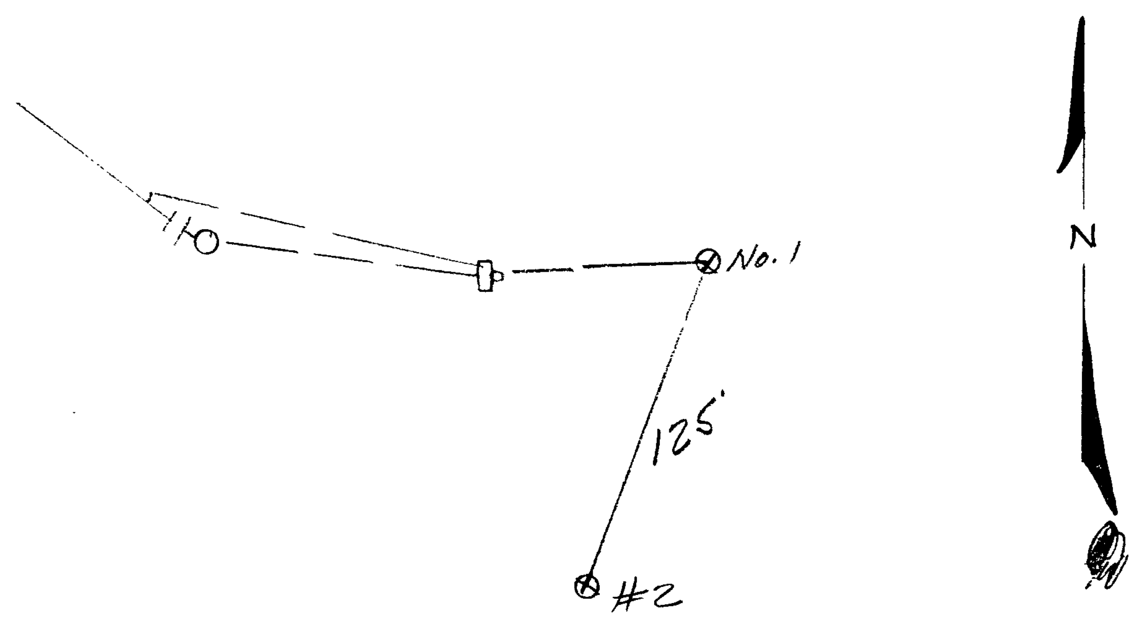
Remarks: 3/4" Hose to No 2 Anode. Perforated All
50 lbs Bentos

Epoxy Poured Above shrunk Sleeve

All Construction Completed

[signature]
(Signature)

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

Bit 13 2-5/8" 68'

LEASE ______ WELL NO. 65W CONTRACTOR Monarch Const. RIG NO. 152 REPORT NO. ______ DATE ______ 19__

MORNING

Driller ______ Total Men In Crew ______

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	15	SS		
15	25	Shale		
25	30	SS		
30	60	Shale & SS		

BIT NO. 78743

SERIAL NO.

SIZE 5" 192'

TYPE

MAKE

NO. DC ____ SIZE ____ LENG. ____

NO. DC ____ SIZE ____ LENG. ____

STANDS

SINGLES

DOWN ON KELLY

TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED
			Mud 2 Sacks

FROM	TO	TIME BREAKDOWN
		Damp at 65'
		Water at 160' Standing 120'
	10-10	" " 100'

DAYLIGHT

Driller ______ Total Men In Crew ______

FROM	TO	FORMATION	WT-BIT	R.P.M.
60	160	SS & Shale		
162	172	Shale		
172	174	SS & Shale		
174	241	Shale & SS		

BIT NO. 10434

SERIAL NO.

SIZE 7-7/8" 200'

TYPE

MAKE

NO. DC ____ SIZE ____ LENG. ____

NO. DC ____ SIZE ____ LENG. ____

STANDS

SINGLES

DOWN ON KELLY

TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN
10-7-69		5½ hrs.
10-8-69		3 hrs
10-9-69		10 hrs.
10-10-69		7 hrs
10-13-69		3½
		29 hrs.

EVENING

Driller ______ Total Men In Crew ______

FROM	TO	FORMATION	WT-BIT	R.P.M.
241	246	SS		
246	252	Shale		
252	262	SS		
262	310	Shale & SS		

BIT NO. 28104

SERIAL NO.

SIZE 7-7/8" 110'

TYPE

MAKE

NO. DC ____ SIZE ____ LENG. ____

NO. DC ____ SIZE ____ LENG. ____

STANDS

SINGLES

DOWN ON KELLY

TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS –

10-7-69 Left location 11:30 AM - Moved to 65W - Set up + drilled 68' - Changed to 5" Bit - Drilled to 120' - Left 5 PM.

10-8-69 Left yd. 6 AM Arr Rig 7 AM - Damp, Chased hole - Drilled to 160' Chasing dry - Left Rig 10 AM.

10-9-69 " " " " " " Set pit Mixed Mud & Drilled to 260' Changed to 7-7/8 & Reamed to 200'

Left Rig 5 PM.

10-10-69 Left yd 6 AM Arr Rig 7 AM - Reamed to 260 - Drilled to 310' - Rig Down 2 hrs. Left location 4 PM.

10-13-69 - Left yd 6 AM Arr Rig 7 AM - Went in hole thinned down - Left location 10:30

SIGNED: Toolpusher ______ Company Supervisor Harrels

#9 → 30-045-12187
#10 → 30-045-20893

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

Operator MERIDIAN OIL CO. **Location: Unit** A **Sec.** 29 **Twp** 30 **Rng** 9

Name of Well/Wells or Pipeline Serviced Mansfield # 9 & # 12

cps 842w

Elevation 5986' **Completion Date** 8/15/90 **Total Depth** 295 **Land Type** N/A

Casing Strings, Sizes, Types & Depths 20 ft. 8" PVC CAsing

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

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

N/A

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 100 to 110 sample taken

Depths gas encountered: N/A

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

3300 lbs. Ashbury Petroleum Coke

Depths anodes placed: 270, 260, 250, 240, 230, 220, 210, 200, 190, 180

Depths vent pipes placed: 1" PVC Pipe 300 ft.

Vent pipe perforations: Perforated 200 ft.

Remarks: gb #2

RECEIVED
MAY 31 1991
OIL CON. DIV
DIST. 3

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

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

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

#14

WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

Drilling Log (Attach Hereto) ☐ Completion Date 8-15-90

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check
842-W	Mansfield #9 Mansfield #12			☑ Good ☐ Bad

Location:	Anode Size:	Anode Type:	Size Bit:
A29-30-9	2"X60"	Anotec	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
295'	285'		3300#		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	270	260	250	240	230	220	210	200	190	180
Anode Output (Amps)	4.5	4.3	4.5	4.3	3.4	4.7	5.8	5.5	5.7	4.3

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

Total Circuit Resistance				No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.7	Amps 15.6	Ohms .75			

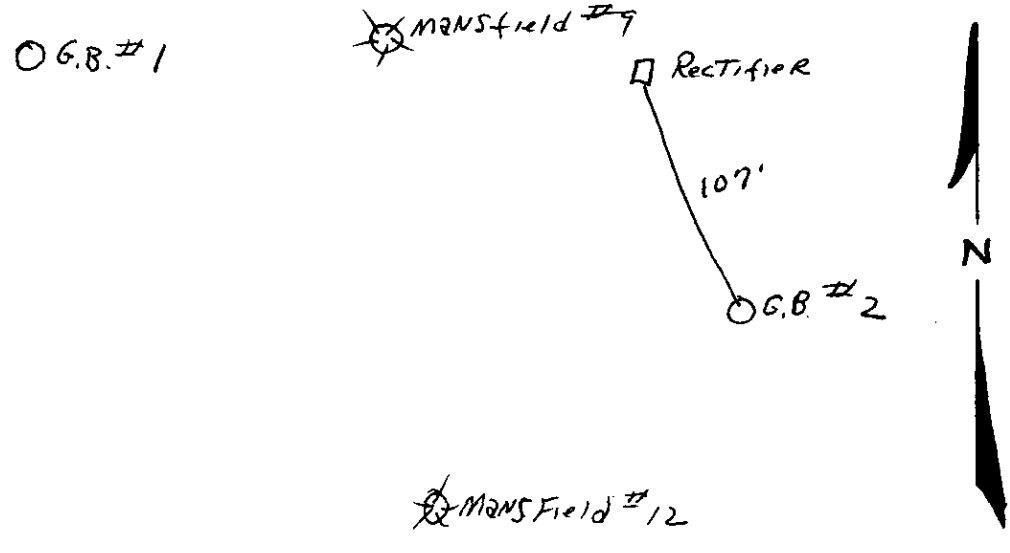
Remarks: Driller said wet 110' to 120' Waited 2 hrs. while driller went to Shop. Blew water and got water sample ON 8-14-90. 8-15-90 loaded hole. Ran 30' of 1" PVC Vent Pipe. Perforated 200' of Vent Pipe. Left coke approximately 130'

Rectifier Size: _____ V _____ A
Addn'l Depth _____
Depth Credit: _____
Extra Cable: 10'
Ditch & 1 Cable: 107'
25' Meter Pole: _____
20' Meter Pole: _____
10' Stub Pole: _____
Junction Box: 1

All Construction Completed

Keller Longstreet Jr
(Signature)

GROUND BED LAYOUT SKETCH



BURG CORROSION SYSTEMS, INC.

P.O. BOX 1359 - PHONE 334-6141
AZTEC, NEW MEXICO 87410

COMPANY Meridian Oil DAILY DRILLING REPORT 8-14 19 90

WELL NAME:	WELL NUMBER:	SECTION:	TOWNSHIP:	RANGE:
Mansfield # 9 & 12	#9	A-29	30	9

WATER AT: 110' FEET: HOLE MADE: 295'

DESCRIPTION OF FORMATION

FROM	TO	FORMATION IS	COLOR
0	18'	PVC CASING - 8" & CEMENTED	
18'	60'	SANDSTONE - SHALE STREAMERS	
60'	80'	SAND - BENTONITE MIX	
80'	100'	Shale	
100'	120'	SAND - WATER - SAMPLE TAKEN	
120'	265'	Shale - SAND STREAMERS	
265	275'	SAND - BENTONITE	
275'	285'	shale	
285	295'	SAND	

REMARKS: SET 20' 8" PVC CASING - WAITED AND GOT A WATER SAMPLE at 110'. DRILLED TO 295' quit when sand was incountered DUE TO GAS POSSIBILY.

Driller Brian E. Burge Tool Dresser

CONSTRUCTION LOGGING READINGS

Meridan Oil

CFS #: 842-W WELL NAME: Mansfield # 9+12 LOCATION: A29-30-9 DATE: 8-15-90

TOTAL VOLTS: 11.7 TOTAL AMPS: 15.6 OHMS RESISTANCE: .75

DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE No.	DEEP	LOG ANODE	ANODE No.
5			185	2.9		365			545		
10			190	2.8	9	370			550		
15			195	2.7		375			555		
20			200	2.6	8	380			560		
25			205	2.5		385			565		
30			210	2.8	7	390			570		
35			215	3.0		395			575		
40			220	2.3	6	400			580		
45			225	1.9		405			585		
50			230	1.7	5	410			590		
55			235	2.2		415			595		
60			240	2.1	4	420			600		
65			245	2.1		425			605		
70			250	2.1	3	430			610		
75			255	2.0		435			615		
80			260	2.2	2	440			620		
85			265	2.9		445			625		
90			270	2.5	1	450			630		
95			275	2.2		455			635		
100	1.90		280	2.0		460			640		
105	1.0		285	2.0	T.D	465			645		
110	1.0		290			470			650		
115	1.0		295			475			655		
120	1.1		300			480			660		
125	1.4		305			485			665		
130	2.5		310			490			670		
135	2.4		315			495			675		
140	2.2		320			500			680		
145	2.2		325			505			685		
150	1.8		330			510			690		
155	1.4		335			515			695		
160	1.3		340			520			700		
165	1.2		345			525			705		
170	1.4		350			530			710		
175	1.4		355			535			715		
180	2.0	10	360			540			720		

ANODE READINGS

NO.	DEPTH	NO COKE	WITH COKE
1	270	3.0	4.5
2	260	2.3	4.3
3	250	2.5	4.5
4	240	2.5	4.3
5	230	1.9	3.4
6	220	2.6	4.7
7	210	3.3	5.8
8	200	3.0	5.5
9	190	3.4	5.7
10	180	1.5	4.3

REMARKS: Driller said wet at 110' to 120', waited 2 hrs. while driller went shop. Blew water. Got water sample

API WATER ANALYSIS REPORT FORM

4197

Laboratory No.

Company: Meridian	Sample No.	Date Sampled: 8-14-96	
Field: CPS - 842 -W	Legal Description: A 29-30-9	County or Parish	State
Lease or Unit	Well: Mansfield #9	Depth: 110'-120'	Formation	Water, B/D
Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By	

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

DISSOLVED SOLIDS

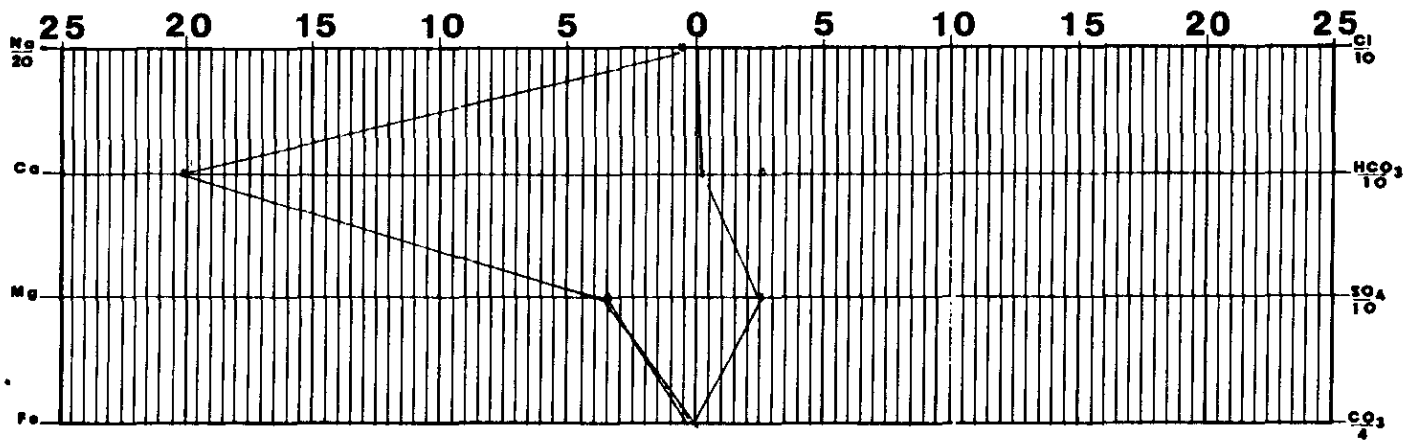
CATIONS	mg/l	me/l
Sodium, Na (calc.)	120	5.7
Calcium, Ca	400	20
Magnesium, Mg	41	3.4
Barium, Ba		

ANIONS		
Chloride, Cl	27	.75
Sulfate, So_4	1230	26
Carbonate, CO_3	0	0
Bicarbonate, HCO_3	140	2.3

OTHER PROPERTIES

pH	7.70
Specific Gravity, 60/60 F.	1.005
Resistivity (ohm-meters) 75° F.	3.95
Total Dissolved Solids (calc.)	1968
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS:
Mark McFarland



Date Received	Preserved	Date Analyzed	Analyzed By
8-22-96		8-23-96	

30-045-13112

4654

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

Operator MERIDIAN OIL Location: Unit K Sec. 29 Twp 30 Rng 9

Name of Well/Wells or Pipeline Serviced MANSFIELD #7

cps 62w

Elevation 6027' Completion Date 10/24/69 Total Depth 280' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 100'

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 3960 lbs.

Depths anodes placed: 235', 229', 223', 217', 211', 205', 190', 184'

Depths vent pipes placed: 229' 3/4" HOSE

Vent pipe perforations: 229'

Remarks: gb #2 USED PLASTIC MOULDS TO POUR ANODE CAPS. POURED EPOXY OVER SHRINK SLEEVES.

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

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

El Paso Natural Gas Company
Form 7-238 (Rev. 1-69)

5" # 78744 - 256'
5 1/8" # 203 - 24'

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐ Completion Date 10/24/69

Well Name	Location	CPS No.
MANSFIELD #7	SW 29-30-9	62 W

Type & Size Bit Used	Work Order No.
7 7/8" # 89475 - 245' 7 7/8" # 29381 - 35'	184-54225-5C-20

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
250'	28½ hr.	3960	0	2

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	235'	229'	223'	217'	211'	205'	190'	184'		
Anode Output (Amps)	9.6	9.4	8.3	8.3	8.3	8.1	6.8	7.6		

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

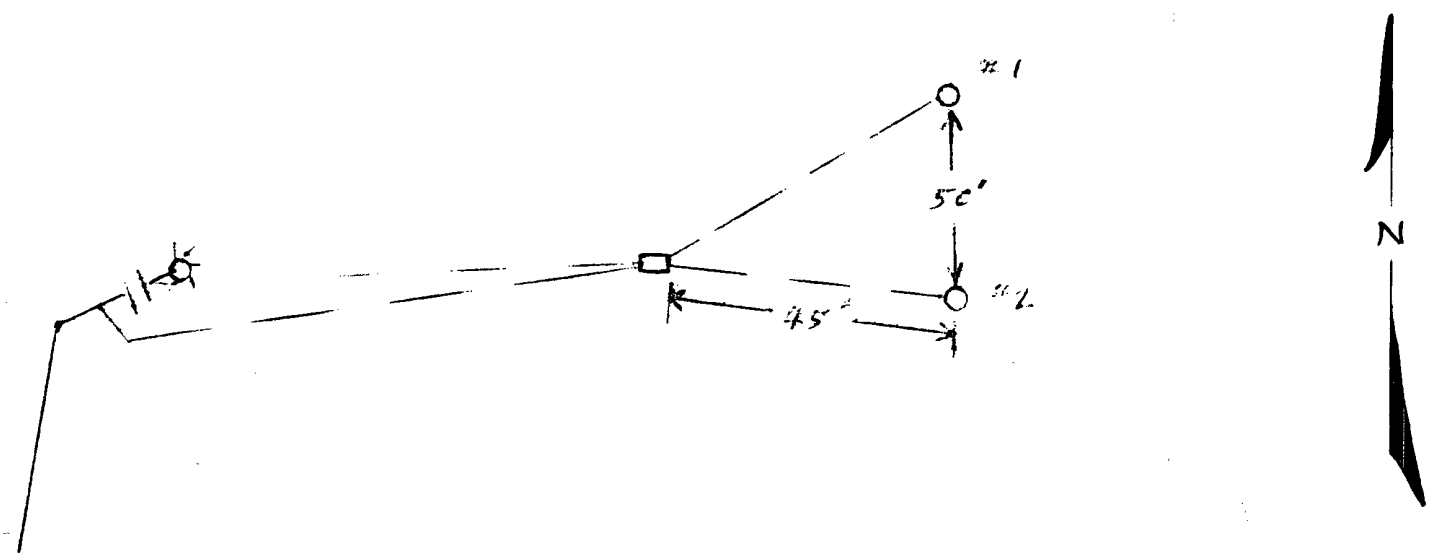
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11	Amps 23	Ohms .48	1904'	0

Remarks: 3/4" vent hose on #2 Anode Perforated To The Top of Hole
used 25 LB BARA Gel
used PLASTIC MOLDS To POUR ANODE CAPS.
Poured EPOXY over shrink SLEEVES

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

(Rev. 1-61)

EL PASO NATURAL GAS COMPANY
DRILLING DEPARTMENT

Bit #203 5¼" 24'

DAILY DRILLING REPORT

LEASE WELL NO. 62 W CONTRACTOR Minnick Const. RIG NO. 150 REPORT NO. DATE 19

MORNING FROM	TO	FORMATION	WT-BIT	R.P.M.	DAYLIGHT FROM	TO	FORMATION	WT-BIT	R.P.M.	EVENING FROM	TO	FORMATION	WT-BIT	R.P.M.
0	20	SS			120	158	SS + Shale							
20	35	Shale			158	199	Shale							
35	100	SS + Shale			199	205	SS							
100	120	SS			205	260	Shale							

Driller / Total Men In Crew (Morning, Daylight, Evening)

	MORNING		DAYLIGHT		EVENING	
BIT NO.	78744	NO. DC SIZE LENG.	89475	NO. DC SIZE LENG.	29381	NO. DC SIZE LENG.
SERIAL NO.		STANDS		STANDS		STANDS
SIZE	5" 256'	SINGLES	7⅞" 245'	SINGLES	7⅞ 35'	SINGLES
TYPE		DOWN ON KELLY		DOWN ON KELLY		DOWN ON KELLY
MAKE		TOTAL DEPTH		TOTAL DEPTH		TOTAL DEPTH

MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED	MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED	MUD RECORD Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED
			2 Sacks Mud.								
			25# Baratos								

FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN
		Water at 100'	10-17-69		- 6 Hrs.			
		10-24-69 - Water at 60'	10-20-69		- 9 Hrs.			
			10-23-69		- 10½ Hrs.			
			10-24-69		3			
					28½ hrs.			

REMARKS –

10-17-69 - Left 61W loc. 11: AM. Arr. 62 W + set up - Drilled 24' with 5¼" - Changed to 5" - lost circ at 115' - Pipe stuck in hole - Pulled out - Left rig 5 PM.
10-20-69 Left yd 6AM. Arr. loc. 7:30 - Set pit, mixed mud + drilled to 260' - 1 hr. down Left Rig 5 PM
10-23-69 - Left yd 6AM - Arr Rig 8AM - Changed to 7⅞" Bit + Reamed to 270' Changed bits at 245' - Left Rig 7:30 PM 1 hr. on ul [illegible] hose.
10-24-69 - Left yd 6AM - Arr Rig 7AM. Went in hole + thinned down - Left loc. 10 AM.
Used water from Canal.

SIGNED: Toolpusher ________ Company Supervisor J E [illegible]

766 11-30-045-20992 E

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

Operator MERIDIAN OIL Location: Unit SW Sec. 29 Twp 30 Rng 9

Name of Well/Wells or Pipeline Serviced MANSFIELD #11

cps 1085w

Elevation 5913' Completion Date 5/23/77 Total Depth 460' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 60'

Depths gas encountered: N/A

Type & amount of coke breeze used: 36 SACKS

Depths anodes placed: 280', 270', 260', 250', 240', 230', 220', 210', 200', 190'

Depths vent pipes placed: 300' OF 1"

Vent pipe perforations: 120'

Remarks: gb #1

RECEIVED
MAY 31 1991
OIL CON. DIV
DIST. 3

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

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

El Paso Natural Gas Company
Form 7-238 (Rev. 11-71)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Logged

Drilling Log (Attach Hereto). ☐

Completion Date 5-23-74

Well Name	Location	CPS No.
Mansfield #11	SW 29-30-9	1085W

Type & Size Bit Used	Work Order No.
6 3/4"	55164

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
460 (Logged 291')				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	280	270	260	250	240	230	220	210	200	190
Anode Output (Amps)	6.1	5.9	6.1	5.5	5.9	5.4	6.1	6.5	5.7	6.0
Anode Depth	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Output (Amps)	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.5	Amps 26.3	Ohms 0.44		

Remarks: Drilled 460'. Logged 291'. WATER standing @ 60' starting Inj @ 360'. Slurryed 36 sacks of coke Perforated 120' of vent Pipe. Installed 300' 1" PVC ventpipe

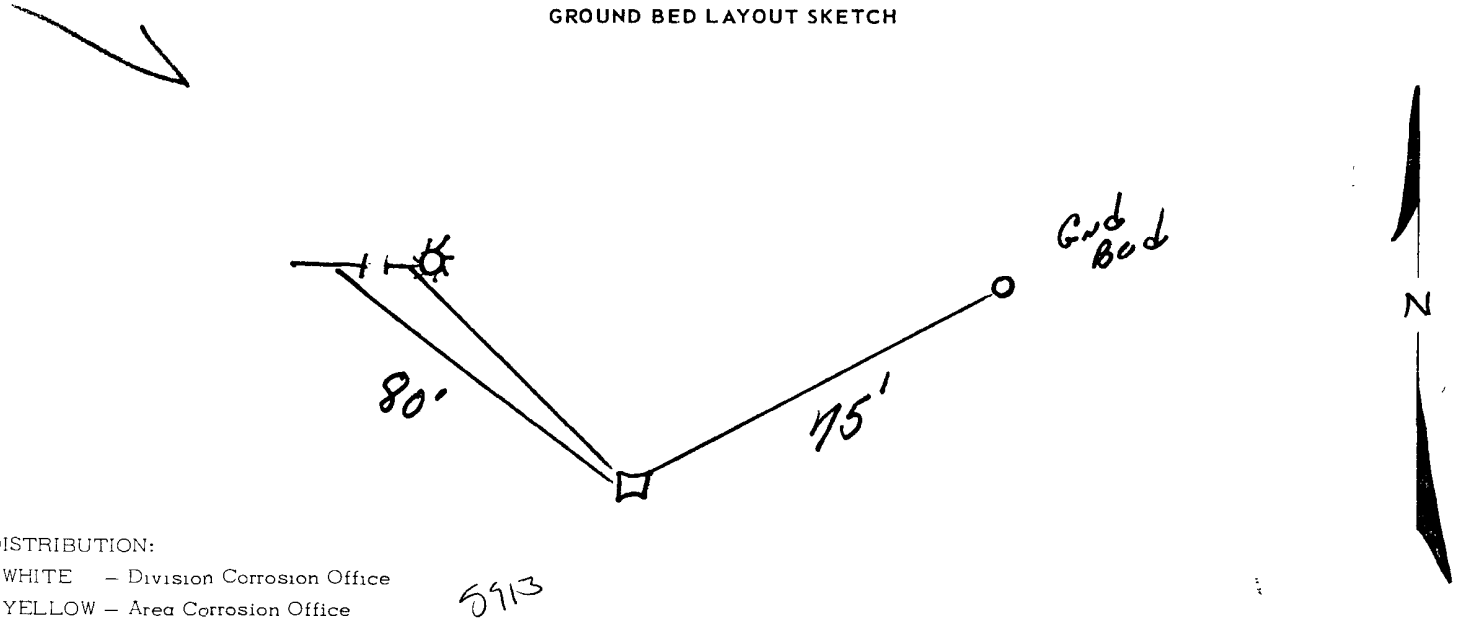
STATIC = 300' EAST 20

Rectifier & Rectifier Pole Needs to be set

All Construction Completed

W. L. Lutt
(Signature)

GROUND BED LAYOUT SKETCH



DISTRIBUTION:
WHITE – Division Corrosion Office
YELLOW – Area Corrosion Office
PINK – Originator File

5913

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE WELL NO. 1085-W CONTRACTOR Posey RIG NO. REPORT NO. DATE 5 - 19 1977

MORNING					DAYLIGHT					EVENING				
Driller		Total Men In Crew			Driller Posey		Total Men In Crew			Driller		Total Men In Crew		
FROM	TO	FORMATION	WT-BIT	R.P.M.	FROM	TO	FORMATION	WT-BIT	R.P.M.	FROM	TO	FORMATION	WT-BIT	R.P.M.

	NO. DC SIZE LENG.		NO. DC SIZE LENG.		NO. DC SIZE LENG.
BIT NO.	NO. DC SIZE LENG.	BIT NO.	NO. DC SIZE LENG.	BIT NO.	NO. DC SIZE LENG.
SERIAL NO.	STANDS	SERIAL NO.	STANDS	SERIAL NO.	STANDS
SIZE	SINGLES	SIZE 6 3/4	SINGLES	SIZE	SINGLES
TYPE	DOWN ON KELLY	TYPE	DOWN ON KELLY	TYPE	DOWN ON KELLY
MAKE	TOTAL DEPTH	MAKE	TOTAL DEPTH	MAKE	TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED	MUD RECORD			MUD, ADDITIVES USED AND RECEIVED	MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.		Time	Wt.	Vis.		Time	Wt.	Vis.	

FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN
0	10	Surface	165	235	Shale			
10	20	Sand (Dusty)	235	245	Wet Sand			
20	35	Shale	245	360	Shale (dry Water)			
3	50	Wet Sand	360	365	Wet Sand			
50	155	Shale	365	460	Shale			
155	165	Wet Sand	460					

REMARKS –	REMARKS –	REMARKS –

SIGNED: Toolpusher _____ Company Supervisor _____

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Date:
By:

MW		gals/mol
16	C_1	6 4
30	C_2	9 56
44	C_3	10 42
58	IC_4	12 38
"	NC_4	11 93
72	IC_5	13 85
"	NC_5	13 71
86	IC_6	15 50
"	C_6	15 57
100	IC_7	17 2
"	C_7	17 46
114	C_8	19.38
28	C_2	[illegible]
42	C_3	[illegible]

MISC.

MW		gals/mol
44	CO_2	6 38
34	H_2S	5 17
28	N_2	4.[illegible]
2	H_2	3 [illegible]

CPS 1085W MANS Field #11

DRiller said wet @ 50'

Started Int. @ 360'

water standing @ 60'

291 Bottom

	100	3.6	(3)	60	3.4	20	vent pipe perforated 120'				
		3.8			3.6		300' vent pipe				
	10	4.0	(2)	70	3.5	30					
		4.1			3.6						
	20	3.9	(1)	80	3.3	40					
		3.7			3.5						
	30	4.0		90	3.7	50					
		3.8		291	3.7						
	40	3.7		300		60					
		3.4									
	50	3.1		10							
		3.1						(1)	280	3.3	6.1
	60	3.2		20							
		3.7						(2)	270	3.5	5.9
	70	4.0		30							
		3.9						(3)	260	3.4	6.1
	80	3.1		40							
		3.2						(4)	250	3.2	5.5
(10)	90	3.4		50							
		3.4						(5)	240	3.1	5.9
(9)	200	3.4		60							
		3.4						(6)	230	3.2	5.4
(8)	10	3.5		70							
		3.3						(7)	220	3.4	6.1
(7)	20	3.4		80							
		3.0						(8)	210	3.5	6.5
(6)	30	3.2		90							
		3.1						(9)	200	3.4	5.7
(5)	40	3.1		400							
		3.4						(10)	190	3.4	6.0
(4)	50	3.2		10							
		3.0					11.5 V 26.3 Amps				

#1 = 30-045-08812

#3 = 30-045-20361

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

Operator Meridian Oil Inc. Location: Unit C Sec. 01 Twp 29 Rng 10

Name of Well/Wells or Pipeline Serviced

Quigley A#1 And SunRay F#3

Elevation 5871' Completion Date 6/25/94 Total Depth 370' Land Type F

Casing Strings, Sizes, Types & Depths 6/24 Set 98' of 8" PVC Casing.
No Gas, Water, or Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented
With 19 Sacks.

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

Depths & thickness of water zones with description of water: Fresh, Clear,
Salty, Sulphur, Etc. Hit Some Fresh Water At 120', And More
Fresh Water At 280'. A Water Sample Was Taken.

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 370' Depth.
Used 90 Sacks of Asbury 218R (4500#)

Depths anodes placed: 336', 328', 307', 299', 291', 283', 240', 230', 220', 210', 200', 190', 180', 170', + 160'

Depths vent pipes placed: Surface To 370'.

Vent pipe perforations: Bottom 250'.

Remarks:

RECEIVED
FEB 19 1997
OIL CON. DIV.
DIST. 3

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

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

CPS GROUND BED CONSTRUCTION WORKSHEET

CPS# 2682-W	P/L NAME(S), NUMBER(S) Quixley A #1 And SunRay F #3					
ID # WG50 WG51	TOTAL	VOLTS 10.32	AMPS 27.9	OHMS .370	DATE 6/25/24	NAME JOHN L. Moss

REMARKS (notes for construction log) Driller Reported WATer AT 120', And More WATer AT 280'. A WATer Sample WAS TAKen. INSTALled 370' OF 1" PE Vent Pipe, WITH THe BOTTom 250' PerforATed. CoKe Breeze To 115'.

DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #
100	.8		295	1.7		490			685		
105	.8		300	1.8	4	495			690		
110	1.0		305	1.7	3	600			695		
115	1.5		310	1.3		605			700		
120	1.8		315	1.2		610					
125	1.6		320	1.3		615					
130	1.5		325	1.3		620					
135	1.3		330	1.7	2	625					
140	1.0		335	1.8	1	630					
145	1.1		340	1.0		635					
150	1.0		345	.8		640					
155	1.2		350	1.2		645					
160	1.5	15	355	1.1		650					
165	1.6		360	1.1		655					
170	1.8	14	365	1.4		660					
175	1.7		370	T.D.	370'	665					
180	1.7	13	375			670					
185	1.7		380			675					
190	1.7	12	385			680					
195	1.7		390								
200	1.8	11	395								
205	1.8		400								
210	1.7	10	405								
215	1.8		410								
220	1.6	9	415								
225	1.7		420								
230	1.6	8	425								
235	1.5		430								
240	1.6	7	435								
245	1.3		440								
250	1.1		445								
255	.9		450								
260	1.0		455								
265	1.0		460								
270	1.1		465								
275	1.4		470								
280	1.5		475								
285	1.6	6	480								
290	1.7	5	485								

DEPTH	NO COKE	FULLY COKED
336'	1.8	7.5
328'	1.8	7.4
307'	1.6	5.9
299'	1.9	6.7
291'	1.8	6.3
283'	1.8	6.2
240'	1.7	6.2
230'	1.8	6.5
220'	1.8	6.6
210'	1.8	6.9
200'	2.0	7.1
190'	1.9	7.1
180'	1.9	7.0
170'	1.9	7.3
160'	1.6	5.7

30-045-09057

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

Operator Texaco E&P Inc. Location: Unit A Sec. 36 Twp 30 N Rng 10 W

Name of Well/Wells or Pipeline Serviced New Mexico Com #1

Elevation ____ Completion Date 5/16/71 Total Depth 300' Land Type* ____

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

If Casing is cemented, show amounts & types used Unknown

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

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. See attached log

Depths gas encountered: ____

Type & amount of coke breeze used: ____

Depths anodes placed: See attached log

Depths vent pipes placed: ____

Vent pipe perforations: ____

Remarks: ____

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

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

WELL TYPE GROUNDBED DATA

DATA SHEET NO. 1

COMPANY TEXACO INC JOB No. 6142 DATE: 5-16-71

WELL: NEW MEX. com WELL No. 1 PIPELINE:

LOCATION: SEC. 36 TWP. 30 RGE. 10E CO. SAN JUAN STATE NEW MEX

ELEV. _____ FT: ROTARY 300 FT: CABLE TOOL _____ FT: CASING _____ FT.

GROUNDBED: DEPTH 200' FT. DIA. 6 3/4 IN. GAS 7650 LBS. ANODES 10 1½ X60" CD-51

DEPTH, FT.	DRILLER'S LOG	DRILL PIPE TO STRUCTURE E	DRILL PIPE TO STRUCTURE I	DRILL PIPE TO STRUCTURE R	EXPLORING ANODE TO STRUCTURE E	EXPLORING ANODE TO STRUCTURE I	EXPLORING ANODE TO STRUCTURE R	DEPTH, TOP OF ANODES	
0-5	LOOSE SAND								
5-10	" "								
10-15	" "								
15-20	" "				12.5		1.20		
20-25	" "						1.90		
25-30	" "						1.70		
30-35	" "						.80		
35-40	" "						1.20		
40-45	SAND WITH WATER						1.50		
45-50	" " "						1.50		
50-55	" " "						1.30		
55-60	" " "						1.20		
60-65	" " "						1.20		
65-70	" " "						1.20		
70-75	" " "						1.20		
75-80	" " "						1.10		
80-85	" " "						1.30		
85-90	" " "						1.20		
90-95	" " "						1.40		
95-100	" " "						1.55		
100-105	BLUE SHALE						1.60		
105-110	" "						1.50		
110-115	" "						1.20		
115-120	" "						1.10		
120-125	" "						1.0		
125-130	" "						1.60		
130-135	" "						1.60		
135-140	" "						1.70		
140-145	" "						1.60		
145-150	" "						1.40		
150-155	" "				12.5		1.20		
155-160	BENTONITIC SAND						1.10		
160-165	" "						1.20		
165-170	" "						1.80		
170-175	" "						2.00	170	5.0
175-180	" "						1.80		
180-185	" "						1.80	180	5.0
185-190	" "						2.10		
190-195	" "						1.80	190	6.0
195-200	" "						1.80		
200-205	" "						1.90	200	5.0
205-210	" "						1.80		
210-215	" "						2.0	210	5.0

GROUNDBED RESISTANCE: (1) VOLTS 12 ÷ AMPS 24 = _____ OHMS

(2) VIBROGROUND _____ OHMS

cathodic protection service
HOUSTON TEXAS

WELL TYPE GROUNDBED DATA

DATA SHEET NO. 2

COMPANY TEXACO INC JOB No. _____ DATE: 5-16-71

WELL: NEW MEX COM WELL NO 1 PIPELINE: _____

LOCATION: SEC. 26 TWP. 30 RGE. 10W CO. SAN JUAN STATE NEW MEX

ELEV. _____ FT: ROTARY 300 FT: CABLE TOOL _____ FT: CASING _____ FT.

GROUNDBED: DEPTH 300 FT. DIA. 6 3/4 IN. GAB 7650 LBS. ANODES 10 1½ X 60" CD-51

DEPTH, FT.	DRILLER'S LOG	DRILL PIPE TO STRUCTURE			EXPLORING ANODE TO STRUCTURE			DEPTH, TOP OF ANODES	
		E	I	R	E	I	R		
215-220	BENTONITIC SAND				12.5		1.80		
220-225	" "						1.80	220	4.5
225-230	" "						1.80		
230-235	" "						1.95	230	4.7
235-240	" "						1.75		
240-245	" "						1.50		
245-250	" "						1.45		
250-255	" "						1.65		
255-260	" "						2.20	255	5.0
260-265	" "						2.20		
265-270	" "						2.10	265	5.0
270-275	" "						2.20		
275-280	" "						1.95	275	5.0
280-285	" "						2.10		
285-290	" "						2.40		
290-295	" "						1.90		
295-300	" "				13.0		2.40		

GROUNDBED RESISTANCE: (1) VOLTS _____ ÷ AMPS _____ = _____ OHMS

(2) VIBROGROUND _____ OHMS

cathodic protection service
HOUSTON TEXAS

3519

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

30-045-09199

Operator MERIDIAN OIL INC. Location: Unit H Sec. 25 Twp 30 Rng 10

Name of Well/Wells or Pipeline Serviced FLORANCE A #1

cps 2028w

Elevation 6309' Completion Date 10/31/88 Total Depth 460' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 45'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 405', 395', 385', 375', 360', 330', 215', 200', 190', 180'

Depths vent pipes placed: 446'

Vent pipe perforations: 400'

Remarks: gb #1 HOLE WENT BLIND AT 230'

RECEIVED
MAY 31 1991
OIL CON. DIV.

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

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

M-07-0238 (Rev. 1-82)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto) ☐

Completion Date 10/31/88

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check
2028 W	FLORANCE ~~A~~ B A1	48362A	.79V 600' N	☒ Good ☐ Bad

Location:	Anode Size:	Anode Type:	Size Bit:
H-25-30-10	2" x 60"	Duriron	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
460	446				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	405	395	385	375	360	330	215	200	190	180
Anode Output (Amps)	5.5	6.1	6.1	5.7	4.8	5.2	4.3	3.7	4.0	4.2

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

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.6	Amps 24.6	Ohms .47		

Remarks: Hit water at 45', took water sample, would not settle out. Installed 446' of 1" P.V.C. vent pipe, perforated 400'. Layed 1/2" fuel line in wire ditch.
Hole went blind at 230'

G.B 4170.00

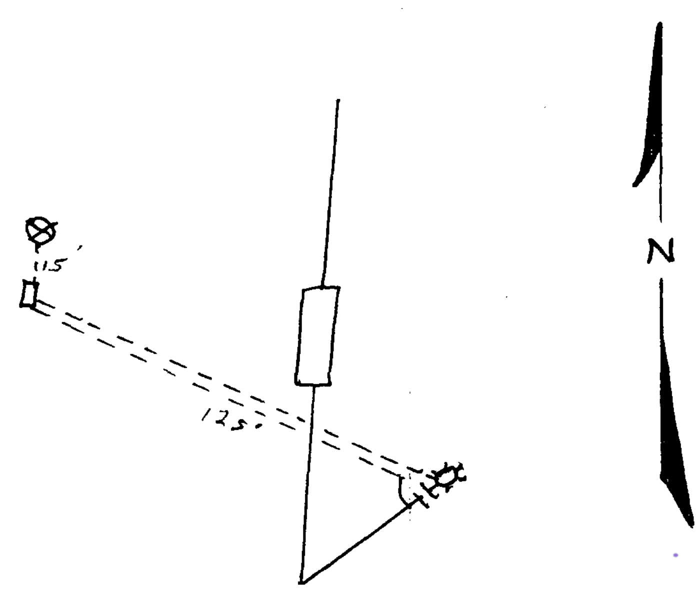
~~Rectifier Size~~: T.E.G. V ______ A 7695.00
Addn'l Depth: 0
Depth Credit: - 54' 3.50 -189.00 ✓
Extra Cable: 155' .25 38.75 ✓
Ditch & 1 Cable: 140' .75 105.00 ✓
25' Meter Pole: 0
20' Meter Pole: 0
10' Stub Pole: 0
JcT. Box 249.00

12068.75 ✓
TAX 603.~~44~~ ✓
TOTAL 12672.19 OK JJ

All Construction Completed

J E Stotts
(Signature)

GROUND BED LAYOUT SKETCH



6309

20286 D. CRASS DRILLING CO.

Drill No. 3

DRILLER'S WELL LOG

S. P. No. Florance #1-A Date 10-31-88

Client Meridian Oil Co. Prospect

County San Juan State New Mex.

If hole is a redrill or if moved from original staked position show distance and direction moved:

FROM	TO	FORMATION — COLOR — HARDNESS
0	40	Sandstone
40	50	Sand
50	65	Shale
65	120	Sandstone
120	150	Shale
150	180	Sandstone
180	235	Shale
235	305	Sandstone
305	420	Shale
420	460	Sandy shale

Mud Bran Lime

Rock Bit Number Make

Remarks: Water @ 45'

Driller Lonnie Brown

30-045-21433

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

Operator Meridian Oil Inc. Location: Unit G Sec. 25 Twp 30 Rng 10

Name of Well/Wells or Pipeline Serviced
Florance A #3

Elevation 6118' Completion Date 6/26/94 Total Depth 409' Land Type F

Casing Strings, Sizes, Types & Depths 6/24 Set 99' OF 8" PVC Casing.
No Gas, Water, or Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented
With 20 Sacks.

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

Depths & thickness of water zones with description of water: Fresh, Clear,
Salty, Sulphur, Etc. Hit Fresh Water at 110'. A Water
Sample Was Taken.

Depths gas encountered: NONE

Ground bed depth with type & amount of coke breeze used: 409' Depth.
Used 104 Sacks of Asbury 218R(5200#)

Depths anodes placed: 350', 335', 300', 290', 275', 250', 240', 196', 188', 180', 172', 164', 156', 148', +140'

Depths vent pipes placed: Surface To 409'.

Vent pipe perforations: Bottom 290'.

Remarks:

RECEIVED
JAN 20 1995
OIL CON. DIV.
DIST. 3

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

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

5223

30-045 - 24384

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

Operator KOCH EXPLORATION COMPANY **Location: Unit** B **Sec.** 25 **Twp** 30 **Rng** 10

Name of Well/Wells or Pipeline Serviced MANSFIELD 1E

Elevation 6079 **Completion Date** 7-21-82 **Total Depth** 360' **Land Type*** F-SF-080766A

Casing, Sizes, Types & Depths NONE

If Casing is cemented, show amounts & types used

NONE

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

NONE

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. @-120' CLEAR,ALKALI

Depths gas encountered: NONE

Type & amount of coke breeze used: METALLURGICAL,2100#

Depths anodes placed: 315'-300'-255'-245'-235'-215'-205'-195'-185'-175'

Depths vent pipes placed: 350'

Vent pipe perforations: FROM 170'DOWN

Remarks:

RECEIVED
MAR 1 6 1990
OIL CON. DIV
DIST. 3

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

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

CORROSION CONTROL CO.

P. O. BOX 179 – PHONE 334-6361
AZTEC, NEW MEXICO 87410

Drilling Log (Attach Hereto). ☐ Completion Date 7-21-82

Well Name	Location	
Mansfield E#1	Koch	
Type & Size Bit Used: 6 3/4"		Work Order No.

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
360	12 hrs	2100#		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	315	300	255	245	235	215	205	195	185	175
Anode Output (Amps)	3.2	3.8	4.0	3.8	3.9	3.5	3.6	3.6	4.0	3.8

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

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.0	Amps 19.8	Ohms .56	2580'	

Remarks: Water at 120'. Used 360' of vent pipe.

++++++ Neg Cable

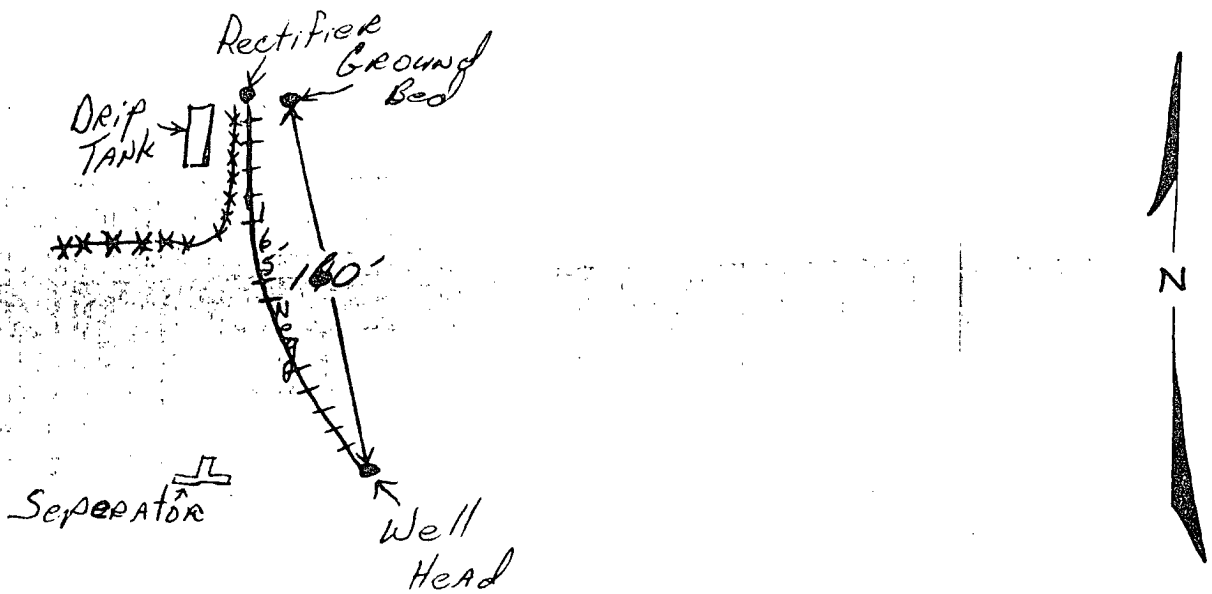
XXXXXXX A. C. Cables.

ONE CENTRAL METER

All Construction Completed

Cody Munckres
(Signature)

GROUND BED LAYOUT SKETCH



ENSOLUM

APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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

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

Form C-138
Revised 08/01/11

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

97057-1125

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Florence #92

AFE: N65887
PM: Gary Turner
Pay Key: RB21200

2. Location of Material (Street Address, City, State or ULSTR):
UL H Section 31 T30 R9W; 36.770647, -107.816134

April 2023

4. Source and Description of Waste:
Source: Hydrocarbon contaminated soil associated with remediation activities from a natural gas pipeline release.
Description: Hydrocarbon contaminated soil associated with remediation activities from a natural gas pipeline release.
Estimated Volume 50 (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 184/55 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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

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

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) 4-10-2023, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011**
Address of Facility: **Hill Top, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

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

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 4/11/23

SIGNATURE: _____ TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Florence #92 (04/13/23)
Ensolum Project No. 05A1226237

ENSOLUM

Photograph 1 Photograph Description: View of the in-process excavation activities.	
Photograph 2 Photograph Description: View of the in-process excavation activities.	
Photograph 3 Photograph Description: View of the in-process excavation activities.	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Florence #92 (04/13/23)
Ensolum Project No. 05A1226237

ENSOLUM

Photograph 4 Photograph Description: View of the in-process excavation activities.	
Photograph 5 Photograph Description: View of the final excavation.	
Photograph 6 Photograph Description: View of the site after initial restoration.	

ENSOLUM

APPENDIX E

Regulatory Correspondence

From:	Kyle Summers
To:	Chad D"Aponti
Cc:	Ranee Deechilly
Subject:	FW: [EXTERNAL] Florence #92 - UL H Section 31 T30 R9W; 36.770647, -107.816134; Incident # nAPP2310326139
Date:	Thursday, April 13, 2023 1:04:24 PM
Attachments:	image003.png image004.png image005.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Thursday, April 13, 2023 7:31 AM
To: Long, Thomas <tjlong@eprod.com>; slandon@blm.gov
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: Re: [EXTERNAL] Florence #92 - UL H Section 31 T30 R9W; 36.770647, -107.816134; Incident # nAPP2310326139

[**EXTERNAL EMAIL**]

Tom,

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

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

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

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

Regards,

Nelson Velez ● Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

(505) 469-6146 | nelson.velez@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Thursday, April 13, 2023 7:18 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; slandon@blm.gov <slandon@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: [EXTERNAL] Florence #92 - UL H Section 31 T30 R9W; 36.770647, -107.816134; Incident # nAPP2310326139

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

Nelson/Sherrie,

This email is a notification and a variance request. Enterprise is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Enterprise would like to collect soil samples for laboratory analysis tomorrow April 14, 2023 at 10:00 a.m. at the Florence #92 excavation. Please acknowledge acceptance of this variance request. If you have any questions, please call or email.

Thank you,

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

Enterprise Products

ENSOLUM

APPENDIX F

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Florence #92 (04/13/23)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[1] (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO)[1] (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria (Tier I)				**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**100**	**600**
Excavation Composite Soil Samples													
S-1	04.14.23	C	10	<0.019	<0.039	<0.039	<0.078	ND	<3.9	<9.9	<50	ND	<60
S-2	04.14.23	C	10	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<9.0	<45	ND	65
S-3	04.14.23	C	0 to 10	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<10	<50	ND	<60
S-4	04.14.23	C	0 to 10	<0.017	<0.035	<0.035	<0.070	ND	<3.5	<9.5	<47	ND	<60
S-5	04.14.23	C	0 to 10	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.5	<47	ND	<60
S-6	04.14.23	C	0 to 10	<0.021	<0.043	<0.043	<0.086	ND	<4.3	<9.9	<49	ND	<60
S-7	04.14.23	C	0 to 10	<0.023	<0.045	<0.045	<0.090	ND	<4.5	<9.5	<48	ND	<60
S-8	04.14.23	C	0 to 10	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.7	<49	ND	<60

[1] = Total combined concentrations are rounded to two (2) significant figures to match the laboratory resolution of the individual constituents.

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

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

APPENDIX G

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 20, 2023

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

RE: Florance 92 OrderNo.: 2304659

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 4/15/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Florance 92 **Collection Date:** 4/14/2023 10:00:00 AM
Lab ID: 2304659-001 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/17/2023 12:47:56 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/17/2023 10:30:36 AM	74347
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/17/2023 10:30:36 AM	74347
Surr: DNOP	106	69-147		%Rec	1	4/17/2023 10:30:36 AM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	4/17/2023 11:55:00 AM	GS9606
Surr: BFB	87.3	37.7-212		%Rec	1	4/17/2023 11:55:00 AM	GS9606
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.019		mg/Kg	1	4/17/2023 11:55:00 AM	BS9606
Toluene	ND	0.039		mg/Kg	1	4/17/2023 11:55:00 AM	BS9606
Ethylbenzene	ND	0.039		mg/Kg	1	4/17/2023 11:55:00 AM	BS9606
Xylenes, Total	ND	0.078		mg/Kg	1	4/17/2023 11:55:00 AM	BS9606
Surr: 4-Bromofluorobenzene	84.8	70-130		%Rec	1	4/17/2023 11:55:00 AM	BS9606

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Florance 92 **Collection Date:** 4/14/2023 10:05:00 AM
Lab ID: 2304659-002 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	65	60		mg/Kg	20	4/17/2023 1:00:20 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/17/2023 10:51:40 AM	74347
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/17/2023 10:51:40 AM	74347
Surr: DNOP	96.7	69-147		%Rec	1	4/17/2023 10:51:40 AM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**CCM**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	4/17/2023 12:17:00 PM	GS9606
Surr: BFB	88.9	37.7-212		%Rec	1	4/17/2023 12:17:00 PM	GS9606
EPA METHOD 8021B: VOLATILES						Analyst:	**CCM**
Benzene	ND	0.017		mg/Kg	1	4/17/2023 12:17:00 PM	BS9606
Toluene	ND	0.034		mg/Kg	1	4/17/2023 12:17:00 PM	BS9606
Ethylbenzene	ND	0.034		mg/Kg	1	4/17/2023 12:17:00 PM	BS9606
Xylenes, Total	ND	0.068		mg/Kg	1	4/17/2023 12:17:00 PM	BS9606
Surr: 4-Bromofluorobenzene	85.5	70-130		%Rec	1	4/17/2023 12:17:00 PM	BS9606

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Florance 92 **Collection Date:** 4/14/2023 10:10:00 AM
Lab ID: 2304659-003 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	4/17/2023 1:12:45 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**PRD**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/17/2023 11:23:18 AM	74347
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/17/2023 11:23:18 AM	74347
Surr: DNOP	97.1	69-147		%Rec	1	4/17/2023 11:23:18 AM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/17/2023 12:38:00 PM	GS96065
Surr: BFB	90.2	37.7-212		%Rec	1	4/17/2023 12:38:00 PM	GS96065
EPA METHOD 8021B: VOLATILES						Analyst:	**CCM**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 12:38:00 PM	BS96065
Toluene	ND	0.049		mg/Kg	1	4/17/2023 12:38:00 PM	BS96065
Ethylbenzene	ND	0.049		mg/Kg	1	4/17/2023 12:38:00 PM	BS96065
Xylenes, Total	ND	0.097		mg/Kg	1	4/17/2023 12:38:00 PM	BS96065
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	4/17/2023 12:38:00 PM	BS96065

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Florance 92 **Collection Date:** 4/14/2023 10:15:00 AM
Lab ID: 2304659-004 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/17/2023 1:25:10 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/17/2023 11:33:52 AM	74347
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/17/2023 11:33:52 AM	74347
Surr: DNOP	95.2	69-147		%Rec	1	4/17/2023 11:33:52 AM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	4/17/2023 1:00:00 PM	GS9606
Surr: BFB	91.1	37.7-212		%Rec	1	4/17/2023 1:00:00 PM	GS9606
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.017		mg/Kg	1	4/17/2023 1:00:00 PM	BS9606
Toluene	ND	0.035		mg/Kg	1	4/17/2023 1:00:00 PM	BS9606
Ethylbenzene	ND	0.035		mg/Kg	1	4/17/2023 1:00:00 PM	BS9606
Xylenes, Total	ND	0.070		mg/Kg	1	4/17/2023 1:00:00 PM	BS9606
Surr: 4-Bromofluorobenzene	87.4	70-130		%Rec	1	4/17/2023 1:00:00 PM	BS9606

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Florance 92 **Collection Date:** 4/14/2023 10:20:00 AM
Lab ID: 2304659-005 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/17/2023 1:37:34 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/17/2023 11:54:58 AM	74347
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/17/2023 11:54:58 AM	74347
Surr: DNOP	95.0	69-147		%Rec	1	4/17/2023 11:54:58 AM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	4/17/2023 1:21:00 PM	GS9606
Surr: BFB	88.4	37.7-212		%Rec	1	4/17/2023 1:21:00 PM	GS9606
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.022		mg/Kg	1	4/17/2023 1:21:00 PM	BS9606
Toluene	ND	0.043		mg/Kg	1	4/17/2023 1:21:00 PM	BS9606
Ethylbenzene	ND	0.043		mg/Kg	1	4/17/2023 1:21:00 PM	BS9606
Xylenes, Total	ND	0.086		mg/Kg	1	4/17/2023 1:21:00 PM	BS9606
Surr: 4-Bromofluorobenzene	83.2	70-130		%Rec	1	4/17/2023 1:21:00 PM	BS9606

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-6
Project: Florance 92 **Collection Date:** 4/14/2023 10:25:00 AM
Lab ID: 2304659-006 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/17/2023 1:49:59 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/17/2023 12:05:33 PM	74347
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/17/2023 12:05:33 PM	74347
Surr: DNOP	95.4	69-147		%Rec	1	4/17/2023 12:05:33 PM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	4/17/2023 1:43:00 PM	GS9606
Surr: BFB	86.0	37.7-212		%Rec	1	4/17/2023 1:43:00 PM	GS9606
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.021		mg/Kg	1	4/17/2023 1:43:00 PM	BS9606
Toluene	ND	0.043		mg/Kg	1	4/17/2023 1:43:00 PM	BS9606
Ethylbenzene	ND	0.043		mg/Kg	1	4/17/2023 1:43:00 PM	BS9606
Xylenes, Total	ND	0.086		mg/Kg	1	4/17/2023 1:43:00 PM	BS9606
Surr: 4-Bromofluorobenzene	81.7	70-130		%Rec	1	4/17/2023 1:43:00 PM	BS9606

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Florance 92 **Collection Date:** 4/14/2023 10:30:00 AM
Lab ID: 2304659-007 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	4/17/2023 2:02:24 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/17/2023 12:26:43 PM	74347
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/17/2023 12:26:43 PM	74347
Surr: DNOP	96.6	69-147		%Rec	1	4/17/2023 12:26:43 PM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	4/17/2023 2:04:00 PM	GS9606
Surr: BFB	87.0	37.7-212		%Rec	1	4/17/2023 2:04:00 PM	GS9606
EPA METHOD 8021B: VOLATILES						Analyst:	**CCM**
Benzene	ND	0.023		mg/Kg	1	4/17/2023 2:04:00 PM	BS9606
Toluene	ND	0.045		mg/Kg	1	4/17/2023 2:04:00 PM	BS9606
Ethylbenzene	ND	0.045		mg/Kg	1	4/17/2023 2:04:00 PM	BS9606
Xylenes, Total	ND	0.090		mg/Kg	1	4/17/2023 2:04:00 PM	BS9606
Surr: 4-Bromofluorobenzene	82.6	70-130		%Rec	1	4/17/2023 2:04:00 PM	BS9606

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

Qualifiers:

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

Analytical Report
Lab Order **2304659**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-8
Project: Florance 92 **Collection Date:** 4/14/2023 10:35:00 AM
Lab ID: 2304659-008 **Matrix:** MEOH (SOIL) **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/17/2023 2:14:49 PM	74353
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/17/2023 12:37:20 PM	74347
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/17/2023 12:37:20 PM	74347
Surr: DNOP	91.5	69-147		%Rec	1	4/17/2023 12:37:20 PM	74347
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	4/17/2023 2:26:00 PM	GS96065
Surr: BFB	91.8	37.7-212		%Rec	1	4/17/2023 2:26:00 PM	GS96065
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.020		mg/Kg	1	4/17/2023 2:26:00 PM	BS96065
Toluene	ND	0.039		mg/Kg	1	4/17/2023 2:26:00 PM	BS96065
Ethylbenzene	ND	0.039		mg/Kg	1	4/17/2023 2:26:00 PM	BS96065
Xylenes, Total	ND	0.078		mg/Kg	1	4/17/2023 2:26:00 PM	BS96065
Surr: 4-Bromofluorobenzene	83.8	70-130		%Rec	1	4/17/2023 2:26:00 PM	BS96065

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304659**
20-Apr-23

Client: ENSOLUM
Project: Florance 92

Sample ID: **MB-74353**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74353**	RunNo: **96079**							
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479713**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74353**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74353**	RunNo: **96079**							
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479714**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304659**

20-Apr-23

Client: ENSOLUM

Project: Florance 92

Sample ID: **MB-74347** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **74347** RunNo: **96078**

Prep Date: **4/17/2023** Analysis Date: **4/17/2023** SeqNo: **3479110** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.5	69	147			

Sample ID: **LCS-74347** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **74347** RunNo: **96078**

Prep Date: **4/17/2023** Analysis Date: **4/17/2023** SeqNo: **3479111** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.8	61.9	130			
Surr: DNOP	4.6		5.000		91.6	69	147			

Sample ID: **2304659-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-1** Batch ID: **74347** RunNo: **96078**

Prep Date: **4/17/2023** Analysis Date: **4/17/2023** SeqNo: **3479118** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.5	47.26	0	89.4	54.2	135			
Surr: DNOP	4.8		4.726		102	69	147			

Sample ID: **2304659-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-1** Batch ID: **74347** RunNo: **96078**

Prep Date: **4/17/2023** Analysis Date: **4/17/2023** SeqNo: **3479119** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.5	47.44	0	91.3	54.2	135	2.50	29.2	
Surr: DNOP	4.7		4.744		98.5	69	147	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304659**
20-Apr-23

Client: ENSOLUM
Project: Florance 92

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3478595** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.8	70	130			
Surr: BFB	2300		1000		229	37.7	212			S

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3478596** 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	980		1000		98.4	37.7	212			

Sample ID: **2304659-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **GS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479812** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.9	19.41	0	91.0	70	130			
Surr: BFB	1700		776.4		222	37.7	212			S

Sample ID: **2304659-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **GS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479813** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.9	19.41	0	84.4	70	130	7.48	20	
Surr: BFB	1600		776.4		206	37.7	212	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304659**
20-Apr-23

Client: ENSOLUM
Project: Florance 92

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3478599** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.6	80	120			
Toluene	0.98	0.050	1.000	0	97.5	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.5	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.3	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3478600** 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	0.95		1.000		95.0	70	130			

Sample ID: **2304659-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-2**	Batch ID: **BS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479821** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.017	0.6761	0	103	68.8	120			
Toluene	0.70	0.034	0.6761	0	104	73.6	124			
Ethylbenzene	0.68	0.034	0.6761	0	100	72.7	129			
Xylenes, Total	2.0	0.068	2.028	0	99.0	75.7	126			
Surr: 4-Bromofluorobenzene	0.56		0.6761		82.2	70	130			

Sample ID: **2304659-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-2**	Batch ID: **BS96065**	RunNo: **96065**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479822** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.66	0.017	0.6761	0	98.0	68.8	120	5.26	20	
Toluene	0.67	0.034	0.6761	0	98.4	73.6	124	5.08	20	
Ethylbenzene	0.65	0.034	0.6761	0	96.2	72.7	129	4.15	20	
Xylenes, Total	1.9	0.068	2.028	0	95.4	75.7	126	3.68	20	
Surr: 4-Bromofluorobenzene	0.55		0.6761		81.0	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: ENSOLUM Work Order Number: 2304659 RcptNo: 1

Received By: Cheyenne Cason 4/15/2023 8:40:00 AM

Completed By: Cheyenne Cason 4/15/2023 9:27:27 AM

Reviewed By: JN 4/17/23

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: CMC 4/15/23

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	4.9	Good	Yes	Morty		

Chain-of-Custody Record

Client: Ensolum, LLC.

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: 10 D
☐ Standard ☑ Rush 4-17-23

Project Name: Florance 92

Project #:

Project Manager: K Summers

Sampler: C DAponti

On Ice: ☑ Yes ☐ No Marty

# of Coolers: 1

Cooler Temp(including CF): 5.0 -0.1 = 4.9 (°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. 4t2304659	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)
4/14	1000	S	S-1	1 4oz Jar	Cool	001	✓	✓					✓			
4/14	1005	S	S-2			002	✓	✓					✓			
4/14	1010	S	S-3			003	✓	✓					✓			
4/14	1015	S	S-4			004	✓	✓					✓			
4/14	1020	S	S-5			005	✓	✓					✓			
4/14	1025	S	S-6			006	✓	✓					✓			
4/14	1030	S	S-7			007	✓	✓					✓			
4/14	1035	S	S-8			008	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/14/23	1130		CMC courier		4/15/23	0840
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Tom Long R13 21200

Sample 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 noted on the analytical report.

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QUESTIONS

Action 353864

QUESTIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 353864
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2310326139**
Incident Name	**NAPP2310326139 FLORENCE #92 @ 0**
Incident Type	**Natural Gas Release**
Incident Status	**Remediation Closure Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	FLORENCE #92
Date Release Discovered	04/13/2023
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Natural Gas Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	*Not answered.*
Condensate Released (bbls) Details	Cause: Corrosion | Pipeline (Any) | Condensate | Released: 5 BBL | Recovered: 0 BBL | Lost: 5 BBL.
Natural Gas Vented (Mcf) Details	Cause: Corrosion | Pipeline (Any) | Natural Gas Vented | Released: 1 MCF | Recovered: 0 MCF | Lost: 1 MCF.
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 353864
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**Yes, according to supplied volumes this will be treated as a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 06/13/2024

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 353864
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Less than or equal 25 (ft.)
What method was used to determine the depth to ground water	OCD Imaging Records Lookup
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Zero feet, overlying, or within area
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	60
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0.1
GRO+DRO (EPA SW-846 Method 8015M)	0.1
BTEX (EPA SW-846 Method 8021B or 8260B)	0.1
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	04/13/2023
On what date will (or did) the final sampling or liner inspection occur	04/14/2023
On what date will (or was) the remediation complete(d)	04/15/2023
What is the estimated surface area (in square feet) that will be reclaimed	345
What is the estimated volume (in cubic yards) that will be reclaimed	184
What is the estimated surface area (in square feet) that will be remediated	345
What is the estimated volume (in cubic yards) that will be remediated	184
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	ENVIROTECH LANDFARM #1 [fEEM0112334691]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 06/13/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Number: 353864
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

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	Action Number: 353864
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**353870**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**04/14/2023**
What was the (estimated) number of samples that were to be gathered	**6**
What was the sampling surface area in square feet	**200**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	345
What was the total volume (cubic yards) remediated	184
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	345
What was the total volume (in cubic yards) reclaimed	184
Summarize any additional remediation activities not included by answers (above)	None

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 06/13/2024

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QUESTIONS (continued)

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 353864

CONDITIONS

Operator:	OGRID:
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CONDITIONS

Created By	Condition	Condition Date
nvelez	None	6/25/2024