ENSOLUM

CLOSURE REPORT

Property:

Sunray G #2C (09/17/24)
Unit Letter P, S21 T31N R09W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2426152565

February 20, 2025 (Updated March 5, 2025)

Ensolum Project No. 05A1226333

Prepared for:

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

Prepared by:

Landon Daniell
Project Geologist

Kyle Summers
Senior Managing Geologist

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Sunray G #2C (09/17/24) (Site)
NM EMNRD OCD Incident ID No.	NAPP2426152565
Location:	36.878552° North, 107.779348° West Unit Letter P, Section 21, Township 31 North, Range 09 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 August 27, 2024, Enterprise personnel identified a potential release of natural gas from the Sunray G #2C pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On August 30, 2024, Enterprise initiated activities to evaluate the pipeline. Due to safety and logistical concerns, these activities were delayed. On September 17, 2024, excavation was resumed. Additionally, Enterprise determined the release was "reportable" due to the potential 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 NM EMNRD OCD. During the evaluation and remediation of the Site, Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action. 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). One POD was identified in the same Public Land Survey System (PLSS) section as the Site. Numerous PODs were identified in the adjacent PLSS sections. The documentation for the closest POD SJ-00029 does not indicate a depth to water (DTW). The closest PODs with recorded DTWs (SJ-04097 (PODs 4 - 7)) are approximately 0.48 miles south of the Site and 42 feet lower in

elevation than the Site. The average DTW for these PODs is 49 feet below grade surface (bgs) (**Figure A**, **Appendix B**).

- No cathodic protection wells were identified in the same PLSS section as the Site. Numerous cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the adjacent PLSS sections. These CPWs are depicted in **Figure B** (**Appendix B**). The three closest CPWs (Riddle D #3, Schwerdtfeger #2A, and Horton #1) are within one mile of the Site. Documentation for the cathodic protection well located near the Riddle D #3 production pad indicates a depth to water of 190' feet bgs. This cathodic protection well is located approximately 0.33 miles northeast of the Site and is approximately 100 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Schwerdtfeger #2A production pad indicates a depth to water of approximately 170 feet bgs. This cathodic protection well is located approximately 0.66 miles southeast of the Site and is approximately 128 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Horton #1 production pad indicates a depth to water of approximately 190 feet bgs. This cathodic protection well is located approximately 0.71 miles southwest of the Site and is approximately 19 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 within a first-order drainage to a "blue line" ephemeral wash.

- 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**). The Site is located within 300 feet of an "Intermittently Flooded" (J) riverine, which is not generally designated as a wetland in arid areas.

- 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 but is within 100 feet of one (**Figure H**, **Appendix B**).

Based on available information the Site is located within 300 ft of a NM EMRD OCD-defined continuously flowing watercourse, resulting in a Tier I ranking. The 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 August 30, 2024, Enterprise initiated activities to evaluate the pipeline. Due to safety and logistical concerns, these activities were delayed. On September 17, 2024, excavation was resumed. Additionally, Enterprise determined the release was “reportable” due to the potential volume of impacted soil. During the remediation and corrective action activities, Sunland Construction, Inc. provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 33 feet long and 16 feet wide at the maximum extents. The average maximum depth of the excavation measured approximately 10 feet bgs below the floor of the arroyo, with a footprint of approximately 528 ft^2. The lithology encountered during the completion of remediation activities consisted primarily of sandy clay and sandstone.

Approximately 382 cubic yards (yd^3) of petroleum hydrocarbon-affected soils and 9 barrels (bbls) of water and hydro-excavated soil cuttings were transported to the Envirotech, Inc., (Envirotech) landfarm in San Juan County, 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 grade.

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 ten composite soil samples (S-1 through S-10) from the excavation and one composite sample BF-1 from the backfill for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft^2) or less sample area per guidelines outlined in Section D of 19.15.29.12 NMAC. The excavation bucket and hand tools were utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event
On September 18, 2024, 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 (2' to 10'), S-4 (0' to 10'), S-5 (0' to 10'), S-6 (3' to 10'), S-7 (3' to 10'), S-8 (0' to 3'), S-9 (0' to 10'), and S-10 (0' to 2') were collected from the vertical and sloped walls of the excavation.

Second Sampling Event
On January 15, 2025, sampling was performed at the Site. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil sample BF-1 was collected from the imported fill.

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 Eurofins Environment Testing South Central, LLC (Eurofins) 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-10 and BF-1) to the applicable NM EMNRD OCD closure criteria. The laboratory analytical results are summarized in **Table 1** (**Appendix F**).

- The laboratory analytical results for the composite soil samples indicate that benzene is not present in soils remaining at the Site 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 composite soil samples S-6, S-8, S-9, and S-10 indicate total BTEX concentrations ranging from 0.094 mg/kg (S-9) to 0.40 mg/kg (S-6), which are less than the NM EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for the other composite soil samples collected from soils remaining at the Site indicate total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil samples S-6, S-8, and S-10 indicate total combined TPH GRO/DRO/MRO concentrations ranging from 5.6 mg/kg (S-10) to 13 mg/kg (S-6), which are less than the NM EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the other composite soil samples collected from soils remaining at the Site indicate total combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for the composite soil samples indicate that chloride is not present in soils remaining at the Site at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 600 mg/kg.

7.0 RECLAMATION

The excavation was backfilled with imported fill and then contoured to the surrounding grade. The surface footprint of the excavation is approximately 528 ft^2. The backfill and the upper four feet of the excavation have been analytically verified to be below the Tier I soil standards of 50 mg/kg BTEX, 10 mg/kg benzene, 100 mg/kg total combined TPH, and 600 mg/kg Chloride. See Section 6.0 above, as well as **APPENDIX D** and **APPENDIX F** for further documentation.

8.0 REVEGETATION

Revegetation will be addressed in accordance with 19.15.29.13 NMAC utilizing the recommended seed mix as described in the Vegetation Community Descriptions and Seed Mixes provided by the BLM Farmington Field Office. In this case the surrounding flood-plain/wash vegetation appears to be predominantly of the Sagebrush Vegetation Community. Enterprise will reseed the area with the appropriate seed mix during the next favorable growing season. Enterprise will provide revegetation documentation under separate cover.

9.0 FINDINGS AND RECOMMENDATION

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

- Approximately 382 yd^3 of petroleum hydrocarbon-affected soils and 9 bbls of water and hydro-excavated soil cuttings were transported to the Envirotech landfarm for disposal/remediation.

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

10.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

10.1 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).

10.2 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.

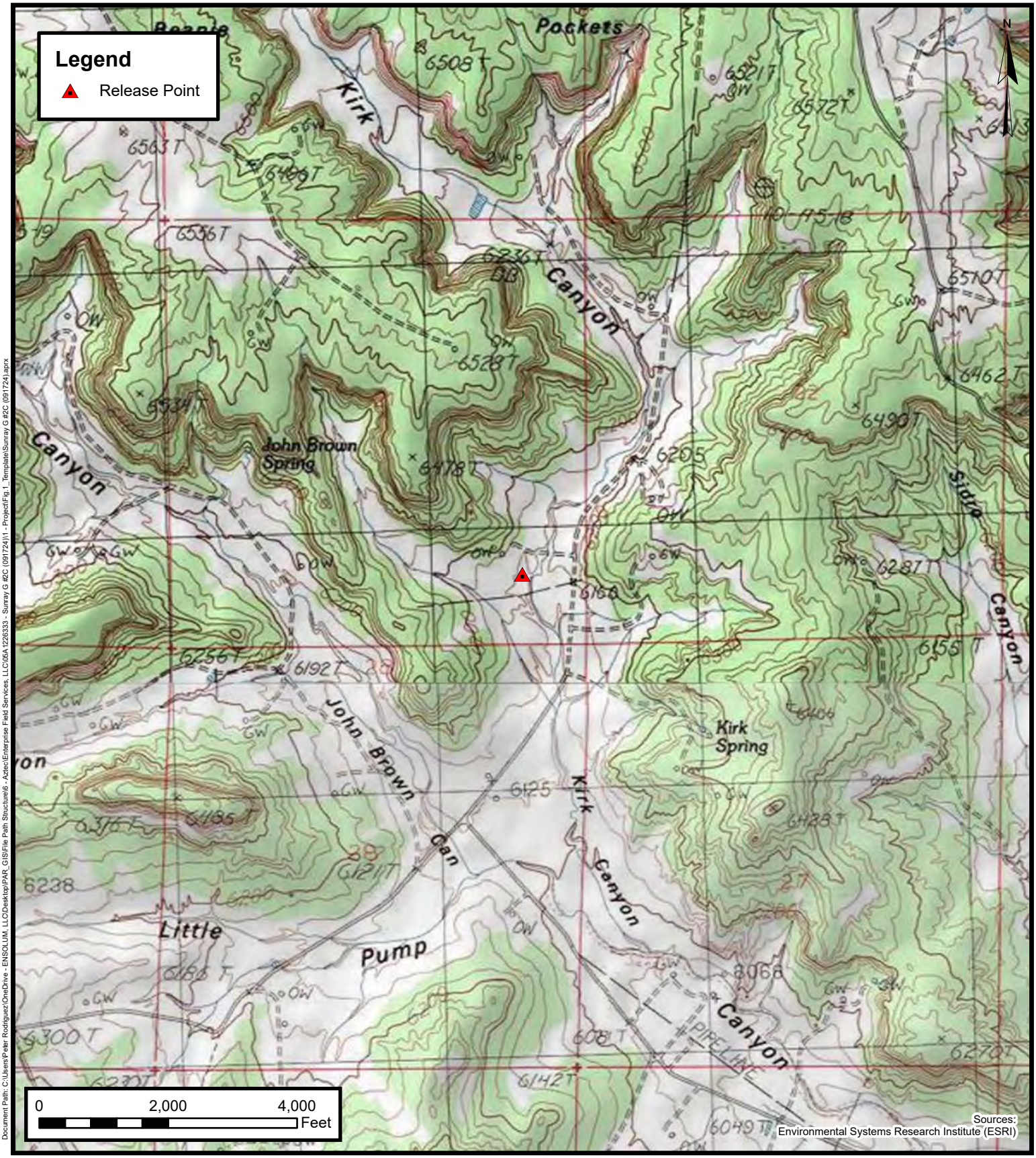
10.3 Reliance

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 this report and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

ENSOLUM

APPENDIX A

Figures



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Topographic Map

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE

1

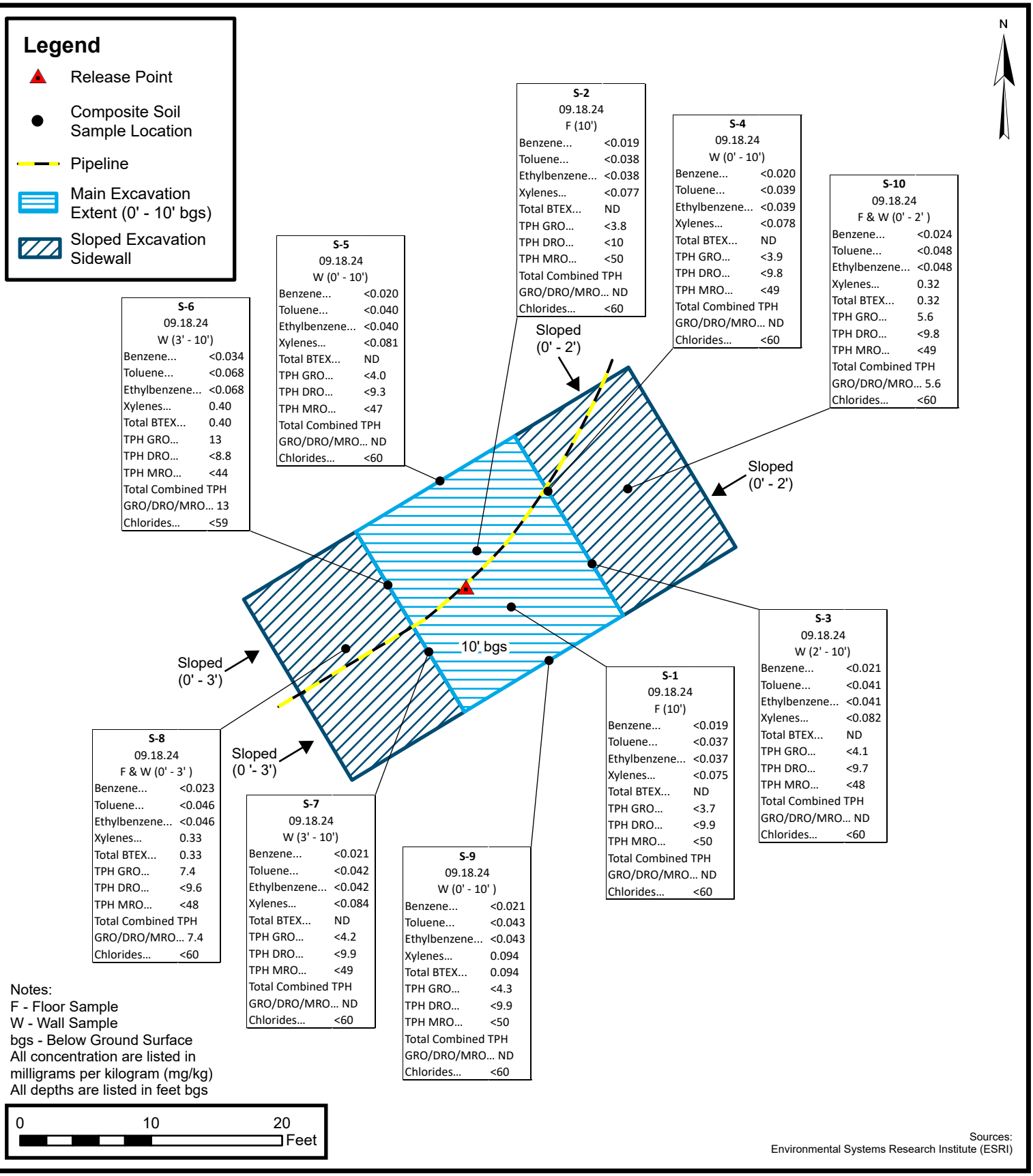
Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Vicinity Map

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE
2



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig.1_Template\Sunray G #2C (09\17\24).aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Map with Soil Analytical Results

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit Letter P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE
3

ENSOLUM

APPENDIX B

Siting Figures and Documentation

Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

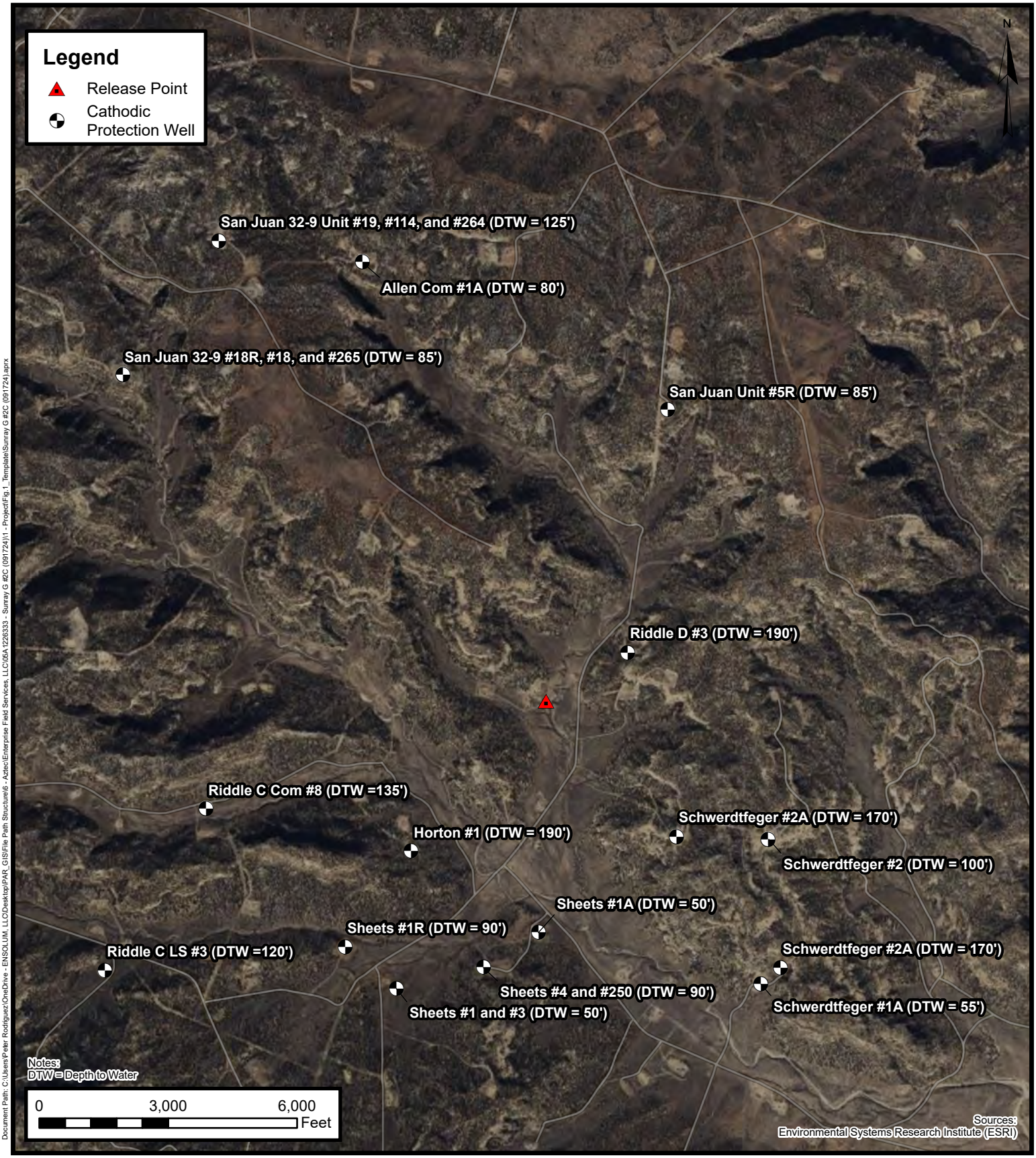
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

1.0 Mile Radius Water Well / POD Location Map

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE

A



Document Path: C:\Users\Peter.Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Cathodic Protection Well
Recorded Depth to Water
Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit L14, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE
B

Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

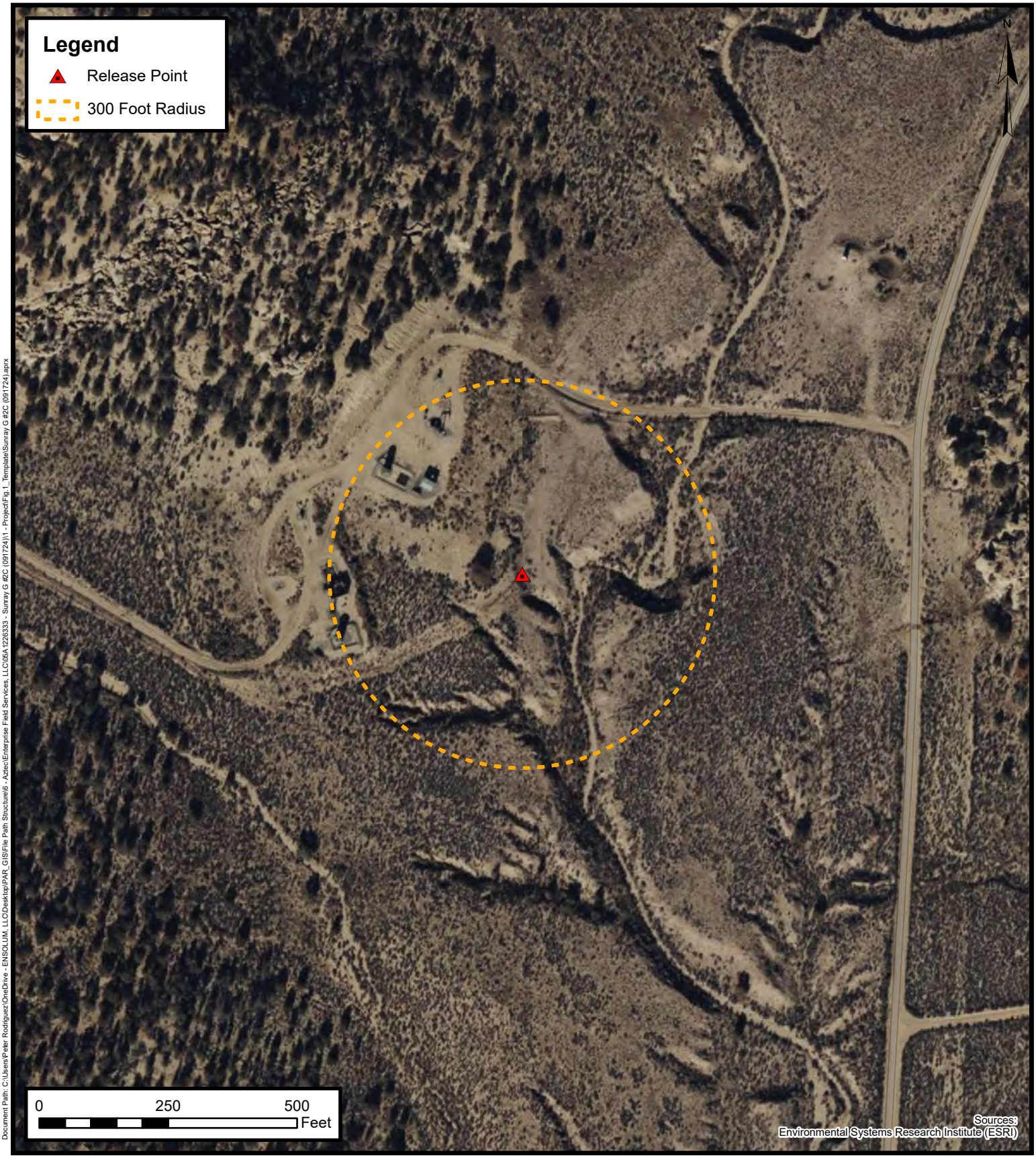
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Watercourse and Drainage Identification

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE

C



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

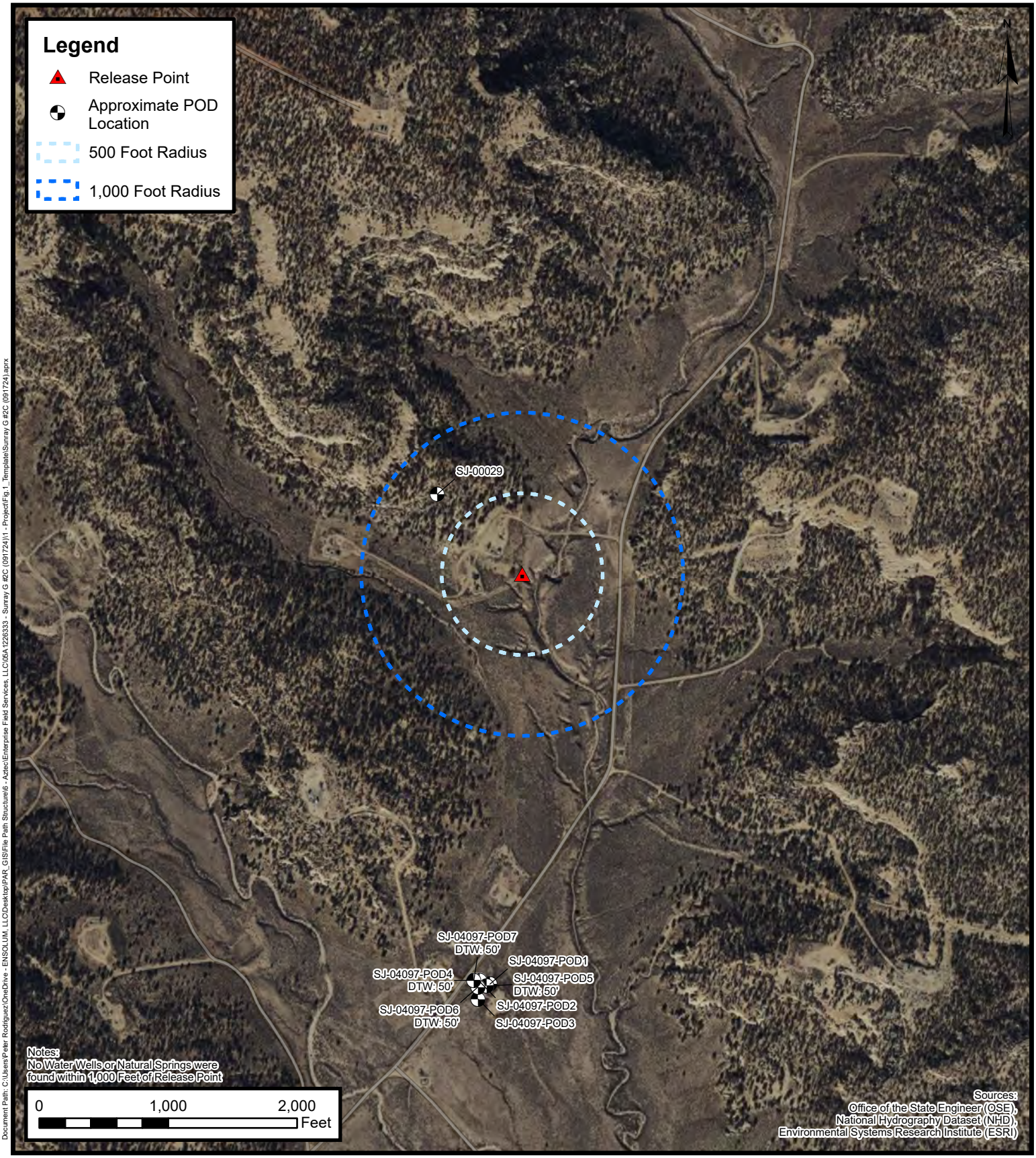
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Occupied Structure Identification

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE

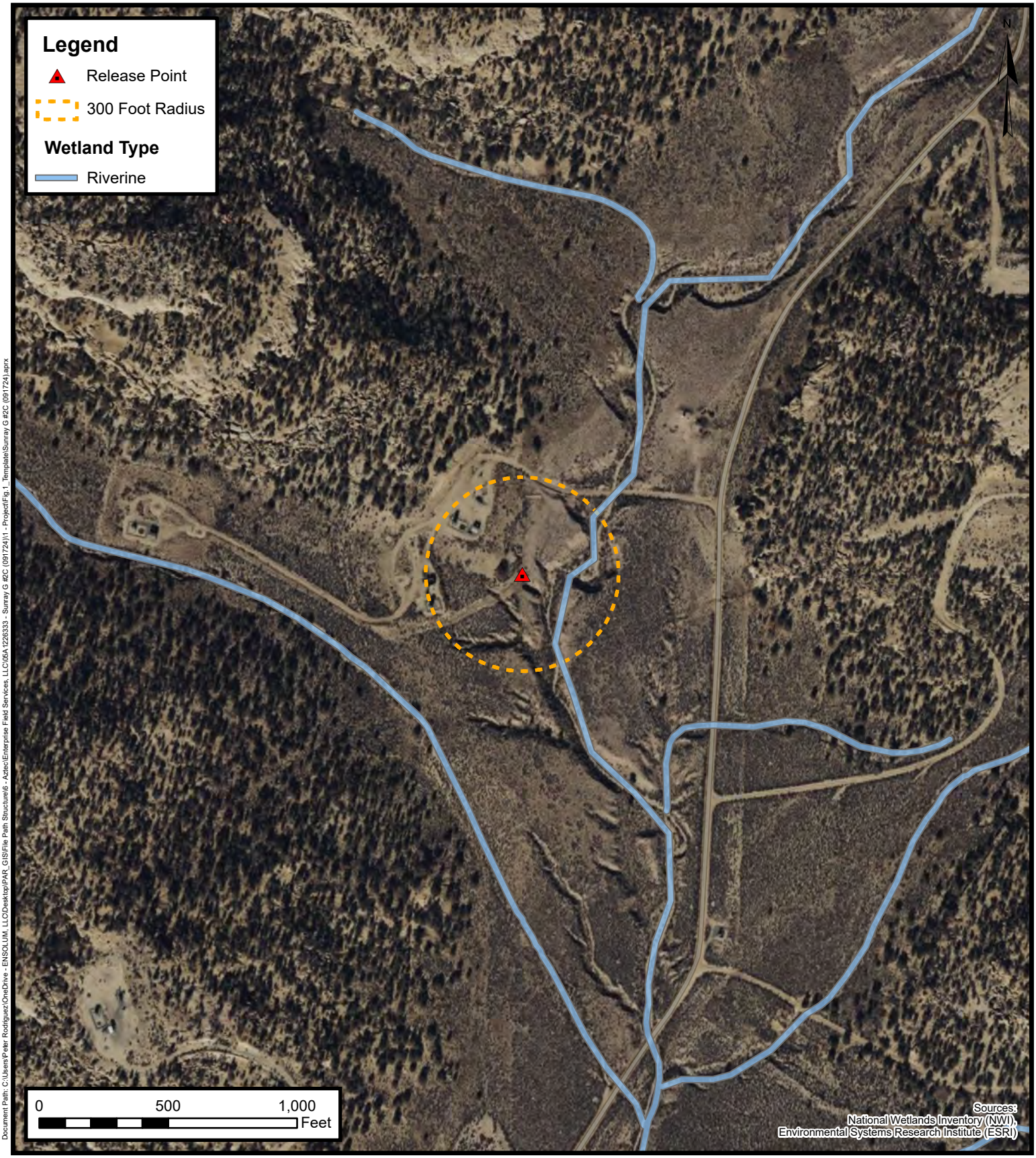
D



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Water Well and Natural Spring Location
Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE
E

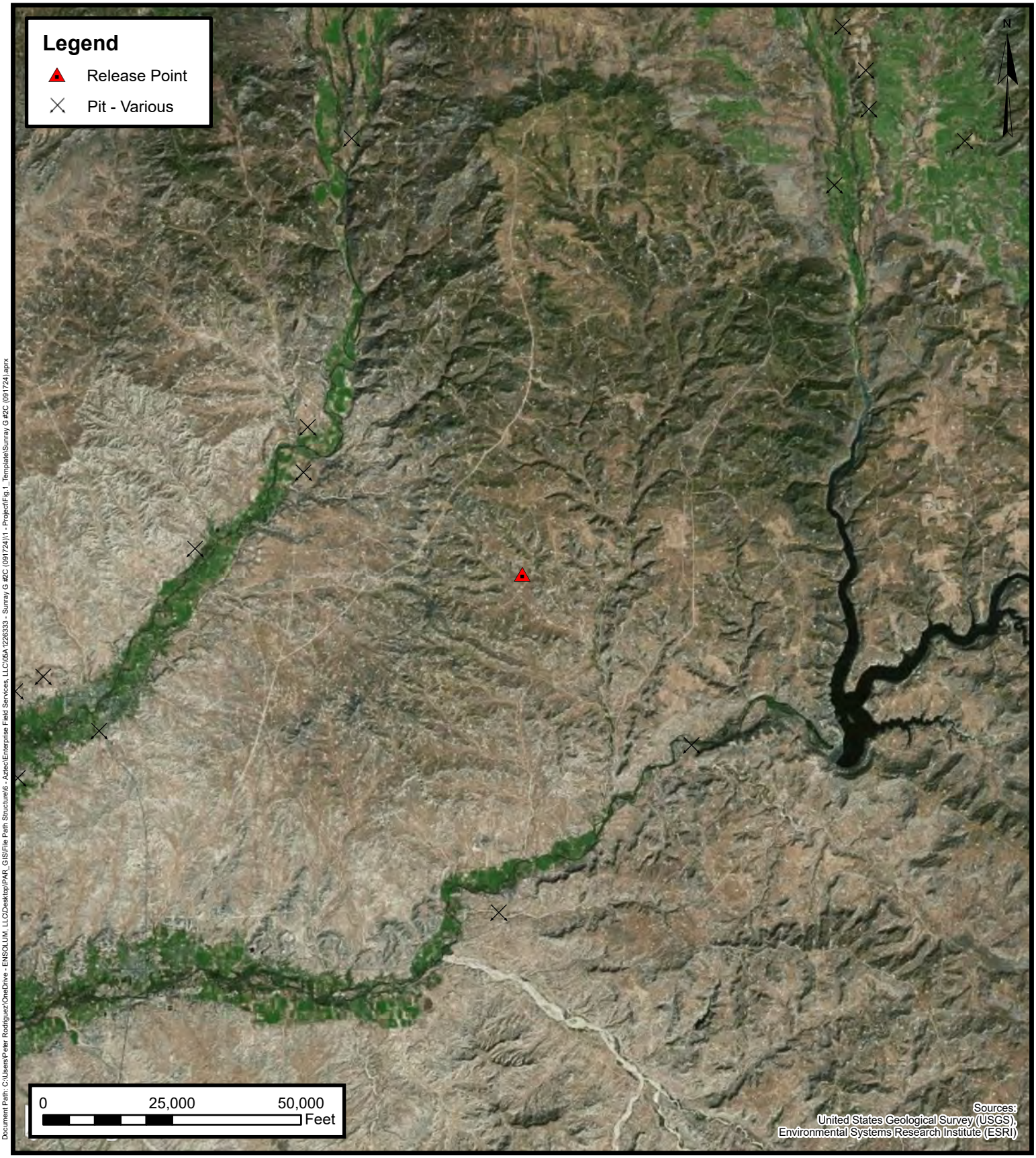


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Wetlands

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE
F



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226333 - Sunray G #2C (09\17\24)\1 - Project\Fig_1_Template\Sunray G #2C (09\17\24).aprx

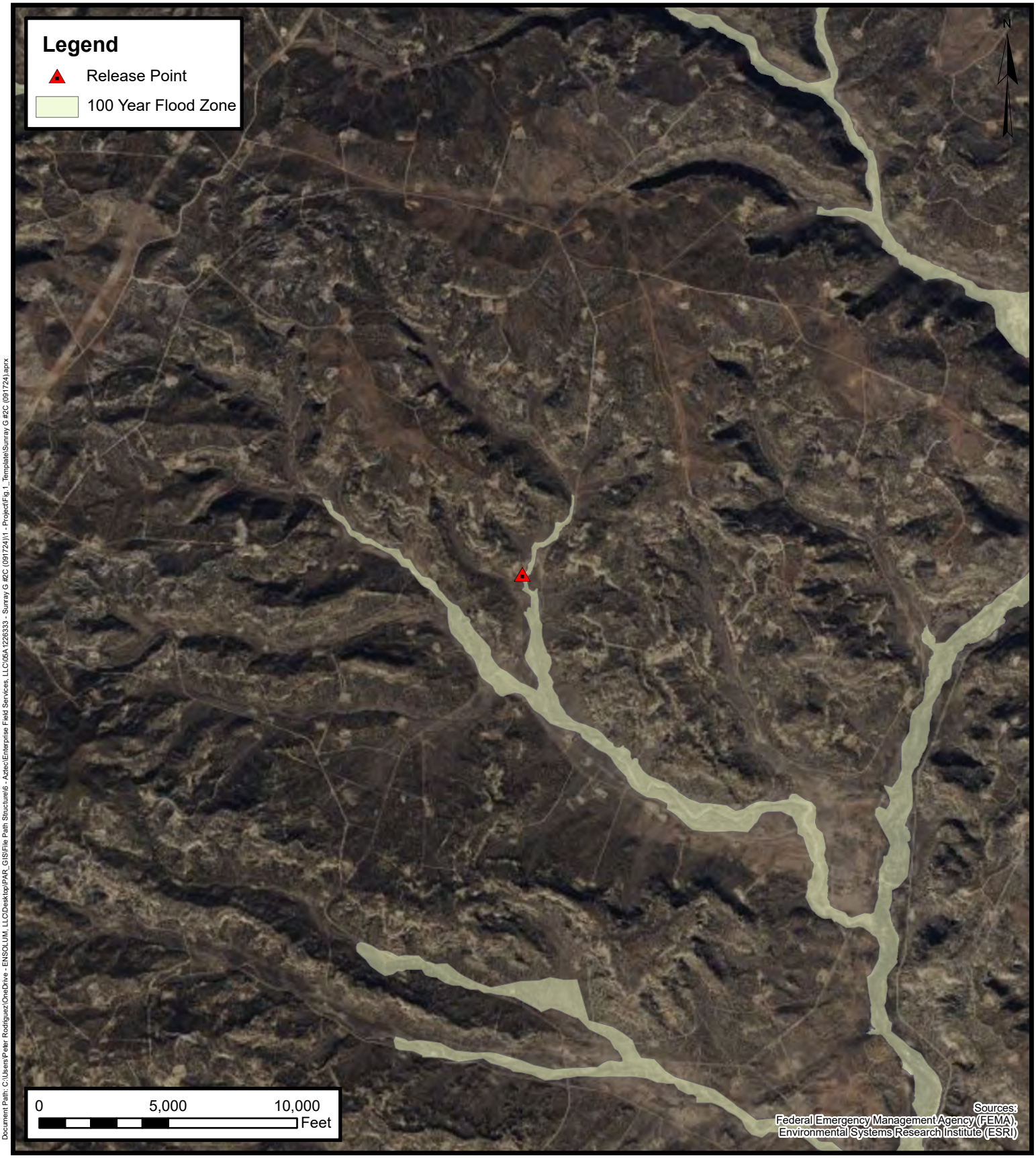
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Mines, Mills, and Quarries

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

FIGURE

G



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

100-Year Flood Plain Map

Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Project Number: 05A1226333
Unit P, S21 T31N R9W, San Juan County, New Mexico
36.878552, -107.779348

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 smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Well Depth	Depth Water	Water Column
SJ 00016		SJ	SJ	SW	SW	SE	27	31N	09W	253339.0	4083235.0 *		118		
SJ 00022		SJ	SJ			NE	20	31N	09W	250557.0	4086032.0 *		202	120	82
SJ 00023		SJ	SJ			SW	17	31N	09W	249764.0	4086871.0 *		550	200	350
SJ 00029		SJ	SJ			SE	21	31N	09W	252139.0	4085175.0 *		178		
SJ 00052		SJ	SJ			SW	20	31N	09W	249738.0	4085267.0 *		510		
SJ 04067 POD21		SJ	SJ		SW	SW	27	31N	09W	252867.1	4083231.2		44		
SJ 04067 POD22		SJ	SJ		SW	SW	27	31N	09W	252881.8	4083234.5		61	48	13
SJ 04067 POD23		SJ	SJ	SW	SE	SW	27	31N	09W	252883.6	4083219.3		58	48	10
SJ 04067 POD5		SJ	SJ	SW	SE	SW	27	31N	09W	248410.4	4083342.1		65	50	15
SJ 04097 POD1		SJ	SJ		SE	NE	28	31N	09W	252211.9	4084248.9		65		
SJ 04097 POD2		SJ	SJ		SE	NE	28	31N	09W	252191.5	4084255.0		55		
SJ 04097 POD3		SJ	SJ		SE	NE	28	31N	09W	252188.4	4084221.0		60		
SJ 04097 POD4		SJ	SJ		SE	NE	28	31N	09W	252192.7	4084256.5		60	50	10
SJ 04097 POD5		SJ	SJ		SE	NE	28	31N	09W	252205.8	4084245.7		60	50	10
SJ 04097 POD6		SJ	SJ		SE	NE	28	31N	09W	252189.0	4084244.0		60	50	10
SJ 04097 POD7		SJ	SJ		SE	NE	28	31N	09W	252181.3	4084256.9		60	50	10

Average Depth to Water: **74 feet**

Minimum Depth: **48 feet**

Maximum Depth: **200 feet**

Record Count: 16

Basin/County Search:
Basin: SJ

PLSS Search:
Range: 09W
Township: 31N

Section: 15,16,17,20,21,22,27,28,29

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

---

262 - 30-045-21899 E

6 30-045-10796

587

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

2207W

Operator Meridian Oil Co. Location: Unit A Sec. 15 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced S.J. 32-9 # 262, # 6

Elevation 6570 Completion Date 6-29-91 Total Depth 440 Land Type F

Casing Strings, Sizes, Types & Depths 100' 8" PVC

If Casing Strings are cemented, show amounts & types used Yes - 20

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. 140' - Fresh

RECEIVED
FEB24 1992
OIL CON. DIV.
DIST. 3

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 440' - Gr. Bed Depth

Loresco - SW 115' to 440' (65 Bags)

Depths anodes placed: #1-425', #2-415', #3-380', #4-370', #5-360', #6-350', #7-305', #8-295', #9-285', #10-275', #11-265', #12-25

Depths vent pipes placed: 440' to Surface

Vent pipe perforations: 140' - 440'

Remarks: No gas encountered in drilling of hole

Water sample taken at 140'

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# 2207	P/L NAME(s), NUMBER(s) SJ 32-9 # 262					
RECT # 6042	TOTAL	VOLTS 12.2	AMPS 16.9	= OHMS .72	DATE 6-29-91	NAME David Ashworth

REMARKS (notes for construction log)

H_2O at 140'

DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	
100	.6		295	2.8	6	490			685			
105	.7		300	2.6		495			690			
110	.6		305	2.2	7	500			695			
115	.6		310	1.2		505			700			
120	.7		315	.9		510			ANODE #	DEPTH	NO COKE	FULLY COK'D
125	.7		320	.7		515						
130	.6		325	.6		520			1	425	2.9	4.3
135	.6		330	.6		525			2	415	2.4	4.0
140	.7		335	.8		530			3	380	2.4	4.0
145	.7		340	1.0		535			4	370	2.5	4.1
150	.9		345	1.4		540			5	360	2.6	4.1
155	1.1		350	2.5	6	545			6	350	2.5	4.0
160	1.2		355	2.5		550			7	305	2.5	4.0
165	1.8		360	2.6	5	555			8	295	3.0	5.1
170	1.9		365	2.6		560			9	285	3.8	5.8
175	1.6		370	2.4	4	565			10	275	2.9	4.6
180	.8		375	2.4		570			11	265	2.7	4.3
185	.6		380	2.1	3	575			12	255	2.6	4.0
190	.6		385	1.1		580			13			
195	.6		390	.9		585			14			
200	.7		395	.9		590			15			
205	.7		400	.9		595			16			
210	.7		405	1.0		600			17			
215	.8		410	2.2		605			18			
220	1.0		415	2.4	2	610			19			
225	1.1		420	3.0		615			20			
230	2.0		425	2.9	1	620			21			
235	2.7		430	2.4		625			22			
240	3.3		435	2.3		630			23			
245	2.7		440	TD-440		635			24			
250	2.5		445			640			25			
255	2.5	12	450			645			26			
260	2.7		455			650			27			
265	2.5	11	460			655			28			
270	2.6		465			660			29			
275	2.9	10	470			665			30			
280	2.8		475			670						
285	3.8	9	480			675						
290	3.2		485			680						

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

65-3495

API WATER ANALYSIS REPORT FORM

Laboratory No. 25-910710-1K

Company	Sample No.	Date Sampled
Meridian Oil		6-29-91

Field	Legal Description	County or Parish	State
	A-15, 31-9	San Juan	N.M.

Lease or Unit	Well	Depth	Formation	Water, B/D
	SJ 32-9 # 262		Coal Seam	

Type of Water (Produced, Supply. etc.)	Sampling Point	Sampled By
C.P. Gr. Bed		D. Ashworth

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

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	2700	120
Calcium, Ca	8	0.4
Magnesium, Mg	7	0.6
Barium, Ba		

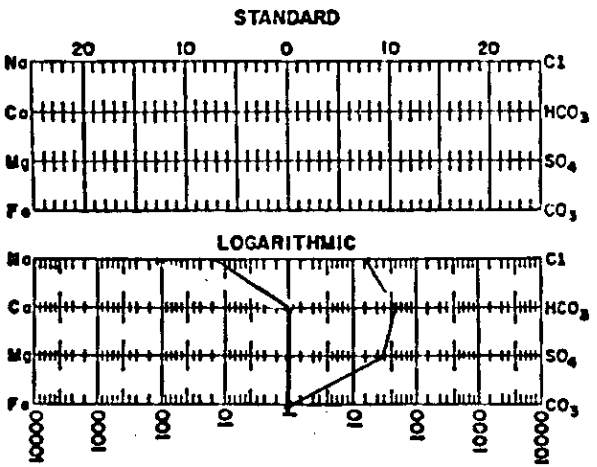
ANIONS		
Chloride, Cl	570	16
Sulfate, So_4	1900	39
Carbonate, CO_3	0	0
Bicarbonate, HCO_3	3200	53

Total Dissolved Solids (calc.)	6400
Iron, Fe (total)	
Sulfide, as H_2S	

OTHER PROPERTIES

pH	8.0
Specific Gravity, 60/60 F.	1.0049
Resistivity (ohm-meters) 49° F.	1.7

WATER PATTERNS — *me/l*



REMARKS & RECOMMENDATIONS:

Date Received	Preserved	Date Analyzed	Analyzed By
7-10-91	No	7-10-91	ES

#5R 30-045-28941

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

Operator Meridian Oil Inc. Location: Unit N Sec. 15 Twp 31 Rng 09

Name of Well/Wells or Pipeline Serviced

San Juan 32-9 Unit #5R

Elevation ____ Completion Date 10/25/93 Total Depth 474' Land Type F

Casing Strings, Sizes, Types & Depths 10/23 Set 59' of 8" PVC Casing.
No Gas, Water, or Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented
With 14 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 85', And More Water At 262'. A Water Sample Was Taken.

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 474' Depth
Used 136 Sack of Asbury 218R (6800#)

Depths anodes placed: 460', 452', 444', 436', 428', 420', 412', 280', 232', 224', 216', 208', 201', 193', + 186'

Depths vent pipes placed: Surface To 474'

Vent pipe perforations: Bottom 350'

Remarks:

RECEIVED
JAN 31 1994
OIL CON. DIV.
DIST. 3

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

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

30-045-10674

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

Operator Texaco E&P Inc. Location: Unit N Sec. 16 Twp 31N Rng 9W

Name of Well/Wells or Pipeline Serviced Wayne Moore #1

Elevation ____ Completion Date 6/1/79 Total Depth 400' Land Type* ____

Casing, Sizes, Types & Depths ____

If Casing is cemented, show amounts & types used ____

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

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

Fresh, Clear, Salty, Sulphur, Etc. ____

Depths gas encountered: ____

Type & amount of coke breeze used: ____

Depths anodes placed: ____

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.

1215

30-045-23572

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. 16 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced ALLEN COM #1A

cps 1553

Elevation 6501' Completion Date 8/27/80 Total Depth 360' 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. 80' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 305', 285', 275', 255', 220', 190', 165', 150', 140', 125'

Depths vent pipes placed: 360'

Vent pipe perforations: 280'

Remarks: gb #1

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

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

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

8 Ave
3 Hrs OT

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

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐ 2" x 60" DURIRON Completion Date 8-27-80

Well Name	Location	CPS No.
ALLEN Com #1A	NW 16-31-9	1553W

Type & Size Bit Used		Work Order No.
6 3/4"	STATIC = .85 WEST	57613-21

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
360' - 350' TD				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	305	285	275	255	220	190	165	150	140	125
Anode Output (Amps)	4.3	3.9	4.3	3.0	3.6	3.3	3.3	4.2	3.4	3.4

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

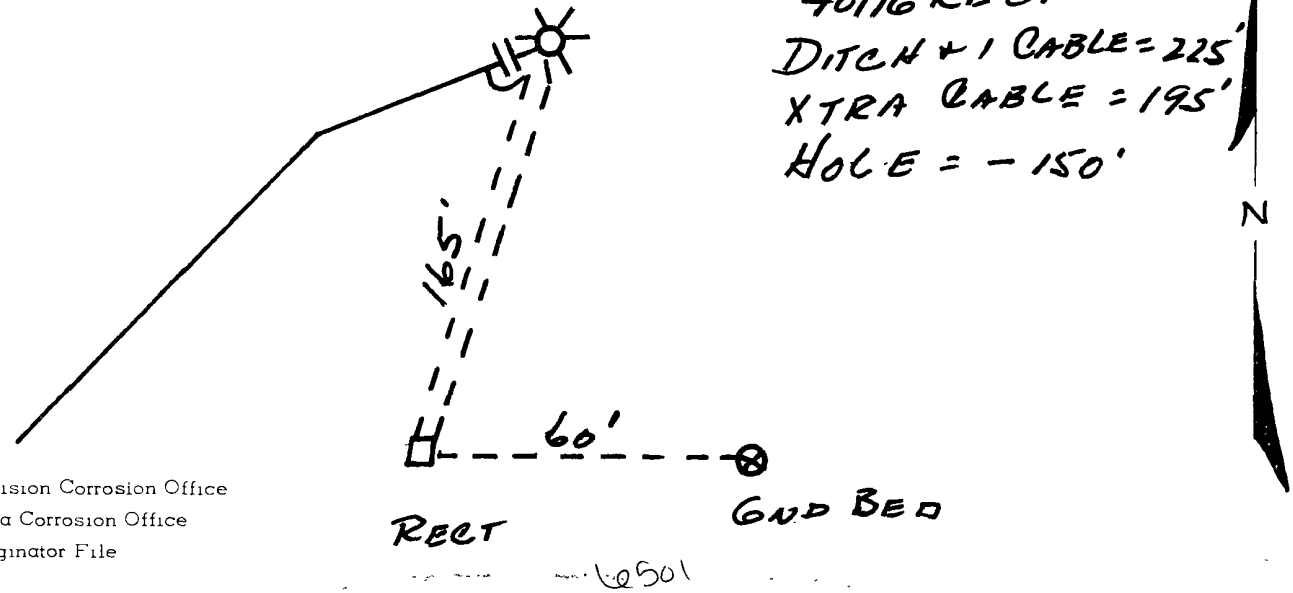
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 12.2	Amps 18.0	Ohms .67		

Remarks: UNION = OK WET 80' - 85' SET OVER NIGHT BLOW SAMPLE DRILLED TO 360' LOGED TO 350' MORE WATER 315' - 325' 280' 1" PERFORATED VENT PIPE 80' 1" PLAIN.

All Construction Completed

B.I.
(Signature)

GROUND BED LAYOUT SKETCH



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

Form 7-1 (Rev 9-77)

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet. ____ of ____
Date:
By 8-27-5
File. BT

UNION = OK 1553 W #57613-31

STATIC = .85 W

ALLEN COM #1H NW16-31-9

WET 80 TO 85' SET OVER NIGHT BLOW SAMPLE. DRILLED TO 360' LOGGED TO 350'
MORE WATER 315 TO 325

280' 1" PERFORATED VENT 80' 1" PLAIN

12.2V 18.0A = .67 Ω

100		
5		
10	1.2	
15	1.9	
20	2.0	
25	1.7	-(10)
30	1.6	
35	1.4	
40	1.2	
45	1.8	-(9)
50	2.5	
55	2.5	-(8)
60	2.7	
65	2.2	
70	2.0	-(7)
75	1.3	
80	1.0	
85	1.2	
90	2.0	
95	2.3	-(6)
200	1.9	

5	1.1	
10	.80	
15	1.0	
20	2.1	
25	2.2	-(5)
30	1.7	
35	1.0	
40	.85	
45	.9	
50	.99	
55	1.0	
60	1.2	-(4)
65	1.9	
70	2.0	
75	2.1	-(3)
80	2.2	
85	2.1	
90	2.2	-(2)
95	2.3	
300	2.2	

5	2.3	-(1)
10	2.3	
15	1.3	
20	.47	
25	.61	
30	.92	
35	1.7	
40	1.8	
45	1.7	
50		TD
55		
60		
65		
70		
75		
80		
85		
90		
95		
400		

1	305	2.8	4.3
2	285	2.6	3.9
3	275	2.6	4.3
4	255	2.0	3.0
5	220	2.7	3.6
6	190	2.7	3.3
7	165	2.4	3.3
8	150	3.0	4.2
9	140	2.2	3.4
10	125	2.4	3.4

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MISC

MW		gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38

LEASE [illegible] 31-9 WELL NO. CONTRACTOR RIG NO. REPORT NO. 5763-21 DATE August 27

MORNING

Driller Kevin Burge Total Men In Crew 2

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	80	sandstone water sand		
80	110	shale sandstone		
110	205	shale		
205	210	sandstone		

BIT NO.
SERIAL NO. 6 3/4
SIZE
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
210	235	shale
235	250	sandstone
250	315	shale
[illegible]	330	Sandstone
[illegible]	360	shale

REMARKS – Water at 80' logged 350'

DAYLIGHT

Driller Total Men In Crew

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

BIT NO.
SERIAL NO.
SIZE
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 –

EVENING

Driller Total Men In Crew

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

BIT NO.
SERIAL NO.
SIZE
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 –

SIGNED: Toolpusher Kevin Burge Company Supervisor ____

EL PASO NATURAL GAS COMPANY
SAN JUAN DIVISION
FARMINGTON, NEW MEXICO
PRODUCTION DEPARTMENT WATER ANALYSIS

CP

Analysis No. 1-10056 Date 12-2-80

Operator El Paso Natural Gas Well Name Allen Com #1A

Location NW 16-31-9 County San Juan State New Mexico

Field Kutz Formation

Sampled From CPS 1553 W @ 80' - 85'

Date Sampled 8-27-80 By B. T.

Tbg. Press. Csg. Surface Csg. Press.

	ppm	epm		ppm	epm
Sodium	48	2.1	Chloride	16	0.5
Calcium	85	4.2	Bicarbonate	224	3.7
Magnesium	16	1.3	Sulfate	168	3.5
Iron	No Test		Carbonate	0	0
H_2S	No Test		Hydroxide	0	0

Total Solids Dissolved 502

pH 7.5

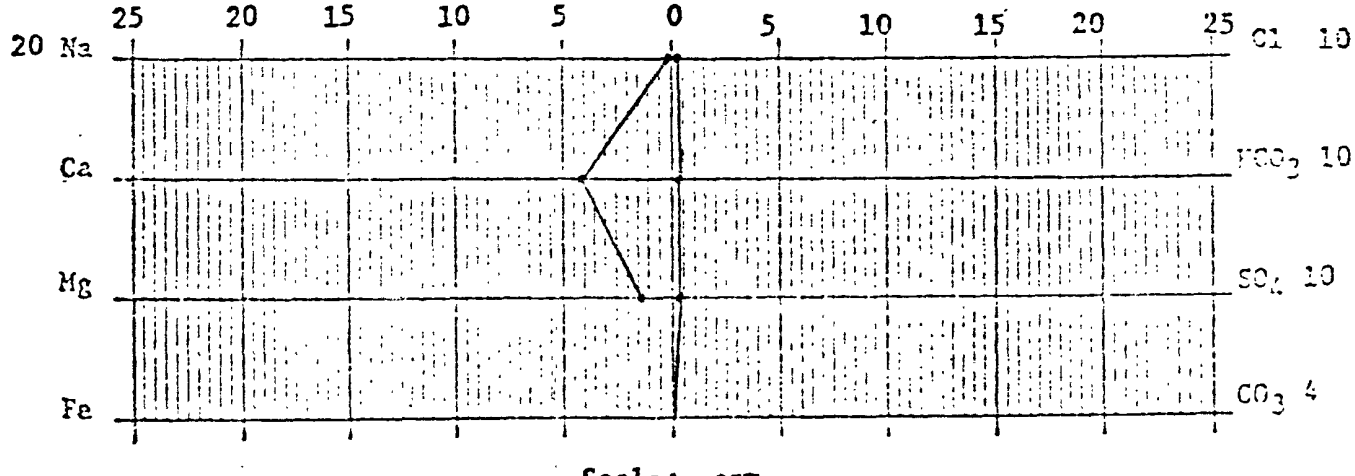
Sp. Gr. 0.9934 At 60°F

Resistivity 1333 ohm-cm at 77°F

Stevens Rich
Chemist

JPB

cc: C.B. O'Nan
R.A. Ullrich
E.R. Paulek
J.W. McCarthy
A.M. Smith
W.B. Shropshire
D.C. Adams
File



Scale: epm

30-045-23978

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 P Sec. 16 Twp 31N Rng 9W

Name of Well/Wells or Pipeline Serviced Wayne Moore Com #1A

Elevation _____ Completion Date 3/14/80 Total Depth 400' Land Type* _____

Casing, Sizes, Types & Depths _____

If Casing is cemented, show amounts & types used _____

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

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

Fresh, Clear, Salty, Sulphur, Etc. _____

Depths gas encountered: _____

Type & amount of coke breeze used: _____

Depths anodes placed: _____

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.

18C-30-045-28942.
18-30-045-10726 Plugged 3836
265-30-045-27993 Plugged.

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

Operator Meridian Oil Inc. Location: Unit K Sec. 17 Twp 31 Rng 09

Name of Well/Wells or Pipeline Serviced

S.J. 32-9 Units #18R, #18, & #265

Elevation 6491' Completion Date 10/22/93 Total Depth 494' Land Type F

Casing Strings, Sizes, Types & Depths 10/20 Set 59' of 8" PVC Casing. No Gas, Water, or Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented With 21 Sacks.

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

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. Hit Some Fresh Water At 85', And More Water At 380'. A Water Sample Was Taken.

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 494' Depth. Used 144 Sacks Of Asbury 218R (7200#)

Depths anodes placed: 463', 455', 448', 441', 434', 427', 420', 413', 406', 266', 259', 195', 188', 171', & 164'.

Depths vent pipes placed: Surface To 494'.

Vent pipe perforations: Bottom 380'.

Remarks:

RECEIVED
JAN 31 1994
OIL CON. DIV.
DIST. 3

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

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

114 = 30-045-28988
19 = 30-045-10769
264 = 30-045-21992

3877

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

Operator Meridian Oil Inc Location: Unit ___ Sec. 17 Twp 31 Rng 09

Name of Well/Wells or Pipeline Serviced

San Juan 32-9 Units #114, #19, and #264

Elevation ____ Completion Date 11/2/93 Total Depth 456' Land Type F

Casing Strings, Sizes, Types & Depths 10/26 Set 60' of 8" PVC Casing. No Gas, Water, or Boulders were Encountered. During Casing.

If Casing Strings are cemented, show amounts & types used Cemented with 14 Sacks.

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

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. Hit a Damp Zone at 65', and Fresh Water at 125', a Water Sample was Taken.

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 456' Depth. Used 130 Sacks of Asbury 218R (6500#)

Depths anodes placed: 399', 392', 361', 354', 347', 290', 283', 276', 269', 184', 177', 153', 146', 139', +132'.

Depths vent pipes placed: Surface To 456'.

Vent pipe perforations: Bottom 340'.

Remarks:

RECEIVED
JAN 31 1994
OIL CON. DIV.
DIST. 3

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

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

1 = 30-045-10471

1R = 30-045-27494

4285

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. 21 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SUNRAY G #1, #1R

cps 391w

Elevation 6187' Completion Date 11/9/71 Total Depth 391' 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. 90'

RECEIVED
MAY 31 1991
OIL CON. DIV
DIST. 3

Depths gas encountered: N/A

Type & amount of coke breeze used: 8100 lbs.

Depths anodes placed: 325', 310', 300', 285', 275', 255', 245', 235', 225', 215'

Depths vent pipes placed: N/A

Vent pipe perforations: 225' - 390'

Remarks: gb #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

Logged

Drilling Log (Attach Hereto). ☐

Completion Date Nov. 9, 1971

Well Name	Location	CPS No.
Sunray 16	SW 21-31-5	391 W

Type & Size Bit Used	Work Order No.
	184-52482-50-20

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
391		8100		

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	325	310	300	285	275	255	245	235	225	215
Anode Output (Amps)	3.6-2.2	2.7-2.5	2.4-2.0	2.5-2.6	2.1-2.0	2.2-2.1	2.3-2.1	2.6-2.4	2.7-2.2	2.5-2.2
	3.8	4.7	3.6	4.5	3.4	3.7	3.7	4.3	4.0	4.0

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

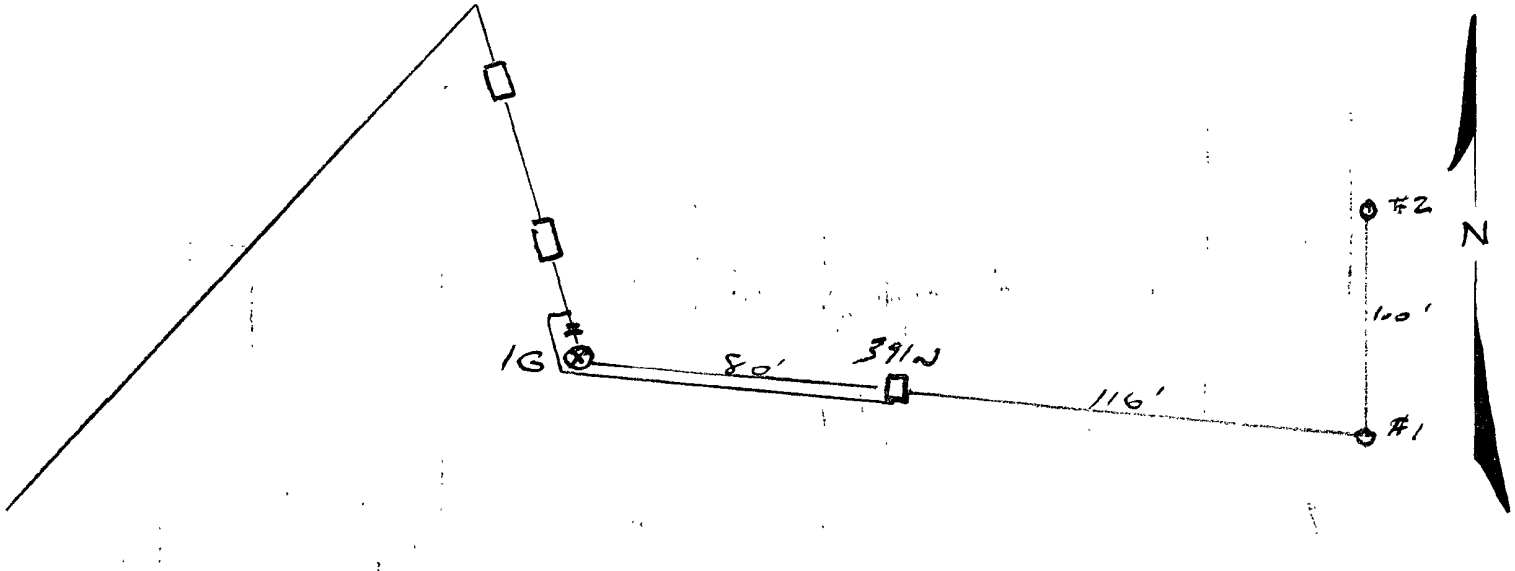
Total Circuit Resistance			No. 8 C.P Cable Used	No. 2 C.P. Cable Used
Volts 12.5	Amps 15.5	Ohms 1.80		

Remarks: Good Water Sands - 90'
Perforations 225' - 340'

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

Dry sand Sunday 16 11-9-71

10				50	90	90	29
					84		27
20				60	84	300	24
					83		24
30				70	63	10	27
					42		32
40				80	Shale 1.41	20	28
					20		24
50				90	25	30	20
					24		138
60				200	23	40	112
					23		12
90				10	26	50	103
					25		95
90	Water Sand			40	27	60	95
					27		106
90	62			30	25	70	112
	78				26		125
100	97			40	28	80	132
	76				23		140
10	76			50	23	90	
	78				24		
20	75			60	22		
	76				137		
30	80			70	96		
	82				21		
40	85			80	20		

Form 22-2 (Rev. 1-61)

C.P.S. 39112

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE Sunray WELL NO. H-1 CONTRACTOR Morrison RIG NO. REPORT NO. DATE 11-9 1971

MORNING

Driller Holland Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	90	dry sand		
90	180	sand blow water at 90 ft		
180	330	shale		
330	390	sand & sandy shale		

BIT NO. NO. DC SIZE LENG.

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

DAYLIGHT

Driller Total Men In Crew

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

BIT NO. NO. DC SIZE LENG.

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

EVENING

Driller Total Men In Crew

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

BIT NO. NO. DC SIZE LENG.

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

SIGNED: Toolpusher Joe Morrison Company Supervisor

4848

30-045-10584

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

Operator MERIDIAN OIL Location: Unit NE Sec. 21 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SUNRAY G #2

cps 434w

Elevation 6502' Completion Date 7/8/63 Total Depth 140' 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 1000 lbs.

Depths anodes placed: 100', 94', 88', 82', 76', 40', 34'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

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.

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

DATE 7-8-63

WELL NAME Sunray No. 2-G CPS NO. 434 W

LOCATION NE¼ Sec. 21 T31N R9W

WORK ORDER NUMBER 184- 40542-50-02

ANODE HOLE DEPTH 140

TOTAL DRILLING RIG TIME 4 Hrs

DRILLING TIME FOR RECTIFIER POLE HOLE 0

TYPE AND SIZE BIT USED 6¼ Rock

NUMBER SACKS MUD USED 2

NUMBER SACKS LOST CIRCULATION MAT'L USED 1

ANODE DEPTHS #1 100, #2 94, #3 88, #4 82 5 76 6 ~~80~~ 734

TOTAL LBS. COKE USED 1000 10 Sacks

ANODE OUTPUTS 12.0 VOLTS, #1 1.4, #2 1.7, #3 2.2, #4 3.0 5 3.0 6 1.5 7 1.5

TOTAL CIRCUIT RESISTANCE: VOLTS 11.4 AMPERES 5.0 OHMS 2.28

NUMBER FEET SURFACE CABLE ~~CONDUIT~~ 399'

DRILLING LOG (ATTACH HERETO).

FORMATION LOG (ATTACH HERETO).

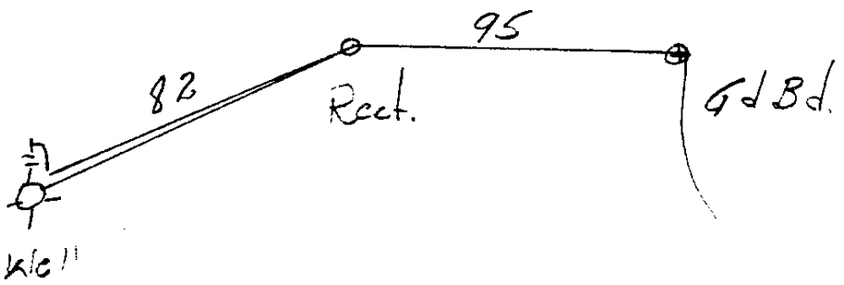
REMARKS: Static G/S .76 @ 600' S
Good All Rect. 40 V 12 A Ser. #62C6387

ALL CONSTRUCTION COMPLETED

Signature

SIGNATURE

GROUND BED LAYOUT SKETCH



ORIGINAL & 1 COPY
ALL REPORTS

DAILY DRILLING REPORT

0	87	S & SC.	[illegible]
87	1??	SC.	"
1??	140	Sh. & SC. [illegible]	"

Bit No. 1358A
Size 6 3/4
Type Rock
Make W.M.

2 Sacks Mud
1 Sack Hulls

7-6-63 Left rig at 5:30 AM. — Rig Time 4 hrs.
7-7-63 Off
7-8-63 Left Bloomfield at 2:30 AM.
Arrived at rig at 7:30 AM.
Finished hole at 8:20 AM.

REMARKS—
7-6-63 Drilled to [illegible] Lost circulation at 52', 2 loads water, 2 1/2 hrs.
7-7-63 Sunday off
7-8-63 Drilled from 126 to 140 [illegible] Flushed hole, 1 1/2 hrs.

Company Supervisor: [signature]

2A = 30-045-22754

250 = 30-045-26915

3547

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

Operator MERIDIAN OIL INC. Location: Unit P Sec. 21 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SUNRAY G #2A, #250

cps 2090w

Elevation 6178' Completion Date 2/3/89 Total Depth 360' 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. 85' & 100' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 315', 305', 295', 285', 275', 265', 255', 220', 195', 185'

Depths vent pipes placed: 347'

Vent pipe perforations: 280'

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)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Completed 2-8-89

Drilling Log (Attach Hereto) ☒

Completion Date 2-3-89

CPS #	Well Name, Line or Plant: #2A	Work Order #	Static:	Ins. Union Check
2090-W	SUNRAY "G" #250	3101A	600' W=.789	☒ Good ☐ Bad

Location:	Anode Size:	Anode Type:	Size Bit:
P21-31-9	2"x60"	Duriron	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
360'	342'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	315'	305'	295'	285'	275'	265'	255'	220'	195'	185'
Anode Output (Amps)	3.0	2.9	3.1	3.4	3.3	3.3	3.3	2.6	3.4	3.3

	#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 11.98	Amps 16.9	Ohms .709		

Remarks: DRILLED 360', LOGGED 342'. DRILLER SAID WATER AT 85' + 100', NO SAMPLE. INSTALLED 347' of 1" PVC VENT PIPE PERFORATED BOTTOM 280'

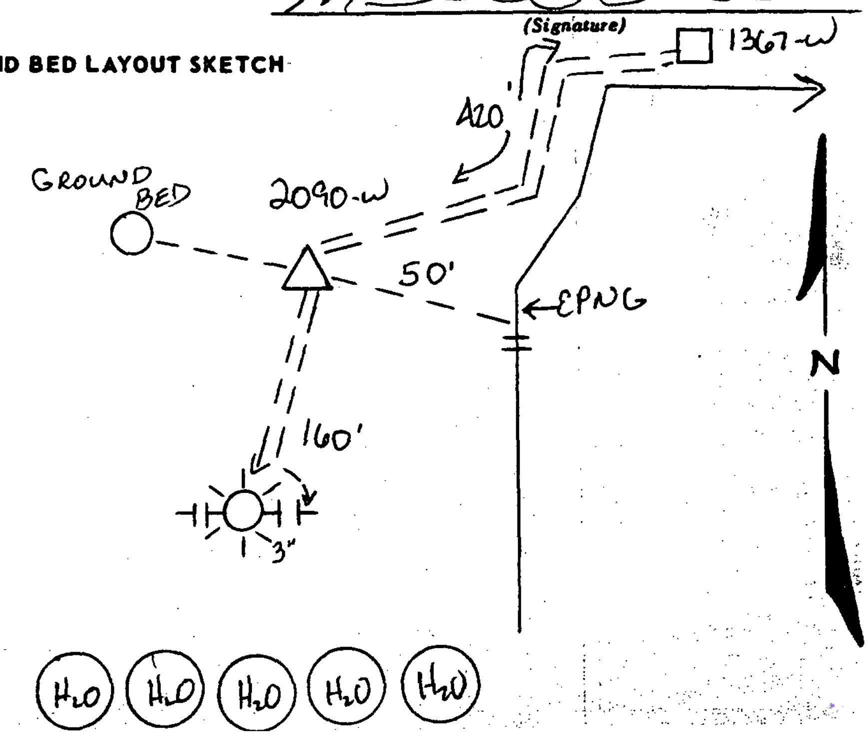
* CAN PLOW AC FROM 1367-W

Rectifier Size: 40 V 16 A
Addn'l Depth
Depth Credit: 158' 3.50
Extra Cable: 640' .24
Ditch & 1 Cable: 690' .70
25' Meter Pole:
20' Meter Pole:
10' Stub Pole: 1
Junction Box: 1

All Construction Completed
[signature]
(Signature)

4074.00
669.00
-553.00 ✓
153.60 ✓
483.00 ✓
158.50
225.00
5210.10
260.51
5470.61 [illegible]
6178

GROUND BED LAYOUT SKETCH



D. CRASS DRILLING CO.

Drill No. 3

DRILLER'S WELL LOG

S. P. No. SUNRAY G #250 Date 2-3-89

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	90	SANDSTONE
90	100	SHALE
100	110	SAND
110	340	SHALE

Mud Bran Lime

Rock Bit Number Make

Remarks: WATER @ [redacted]' 85' & 100'

Driller CONNIE BROWN

1A-30-045-22815
251-30-045-26954

4993

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. 21 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SUNRAY G #1A, #251

cps 1366w

Elevation 6473' Completion Date 4/19/79 Total Depth 300' 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. 50' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 280', 270', 260', 250', 240', 230', 220', 210', 170', 160'

Depths vent pipes placed: 300'

Vent pipe perforations: 260'

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

Drilling Log (Attach Hereto). ☐ #25 [redacted] CONTRACT #1 Completion Date 4-19-79

Well Name	Location	CPS No.
SUNRAY G #1-A	NW 21-31-9	1366W

Type & Size Bit Used	Work Order No.
6 3/4"	57309-21

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
300 - 293				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	280	270	260	250	240	230	220	210	170	160
Anode Output (Amps)	3.3	3.7	2.4	2.5	1.8	2.0	3.3	2.9	3.0	3.8
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 11.8	Amps 11.2	Ohms 1.05		

Remarks: DRILLER SAID WATER @ 50'. DRILLED TO 300' WITH 5 5/8" BIT. CASED HOLE. DRILLED TO 300' WITH 6 3/4" BIT. INSTALLED 10 - 1 1/2" DURIRON ANODES. INSTALLED 300' OF 1" PVC VENT PIPE. PERFORATED 260' OF 1" PVC VENT PIPE. STATIC 600' NE = 0.78. SLURRYED SACKS OF COKE

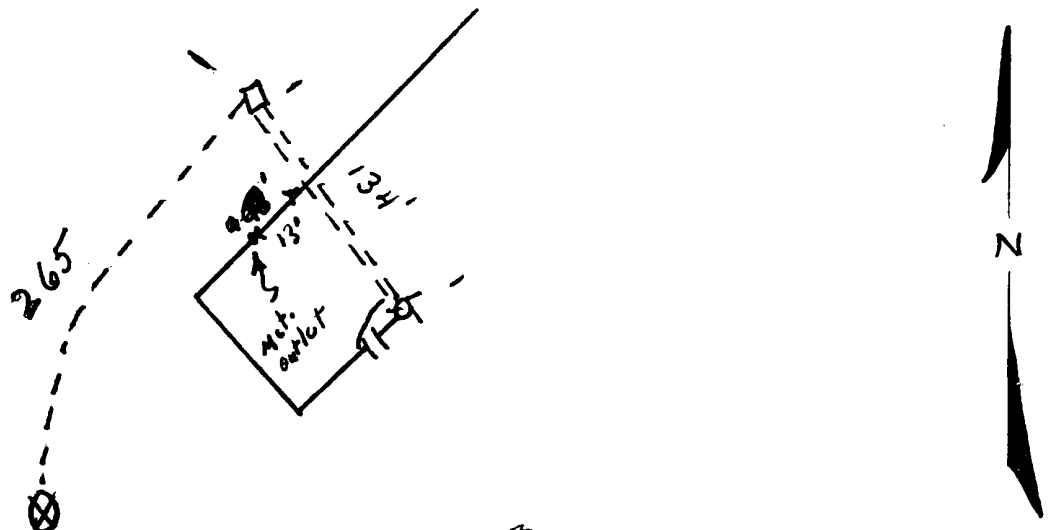
10 - 1 1/2" DURIRON ANODES
1 - STUB POLE
40 V 16 A RECTIFIER
JUNCTION

EXTRA CABLE = 159'
DITCH #1 CABLE = 399'

All Construction Completed

W F Lowe
(Signature)

GROUND BED LAYOUT SKETCH



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

6473

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE 1366 W WELL NO. SUNRAY G/A CONTRACTOR CORROSION CONTROL RIG NO. W-2 REPORT NO. DATE APRIL 19 1979

MORNING

Driller PINSON Total Men In Crew 3

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	- 60	SANDSTONE		
60	- 95	SHALE		
95	- 150	SANDSTONE		
150	- 300	SHALE-SAND		

NO. DC ____ SIZE ____ LENG. ____

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

SE NO. STANDS

SIZE 5⅞ - 6¾ SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

H2O - 60' 1gpm

DAYLIGHT

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 Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

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 Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS –

SIGNED: Toolpusher L C PINSON Company Supervisor

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ___ of ___
Date:
By:
File:

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MISC.

MW		gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38

SunRay G #1-A 1366W NW 21-31-9 57309-21

Static 600' NE = 0.78
10-1½" Anodes Duriron
Stub Pole
40-16 Rectifier

Extra Cable: 159'
Ditch/cable: 399'

Driller said water @ 50'. water sample taken
Drilled to 300' with 5⅝ bit
Logged hole. Drilled to 300' with 6¾ Bit.
Installed 300' of 1" PVC vent pipe
Perforated 260' of 1" PVC vent pipe
Slurryed SACKS of coke

time 10 HRS

Depth	Reading	Anode
60	2.1	
	2.1	
70	2.1	
	2.1	
80	1.6	
	1.2	
90	1.1	
	1.1	
100	1.1	
	1.2	
10	1.3	
	1.3	
20	1.4	
	1.4	
30	1.5	
	1.5	
40	1.5	
	1.5	
50	1.5	
	1.5	
60	2.4	(10)
	2.7	
70	2.4	(9)
	1.7	
80	1.3	
	1.2	
90	1.2	
	1.0	
200	1.0	
	1.2	
10	2.4	(8)
	2.9	
20	2.9	(7)
	2.2	
30	1.6	(6)
	1.6	
40	1.6	(5)
	2.0	
50	2.1	(4)
	2.1	
60	2.1	(3)
	2.7	
70	3.0	(2)
	2.4	
80	3.1	(1)
	1.5	
90		

2.93 TD.
300

140

Anode	Depth		
(1)	280	2.0	3.3
(2)	270	2.9	3.7
(3)	260	1.7	2.4
(4)	250	1.8	2.5
(5)	240	1.3	1.8
(6)	230	1.5	2.0
(7)	220	2.4	3.3
(8)	210	2.0	2.9
(9)	170	2.2	3.0
(10)	160	2.1	3.8

volts 11.8
Amps 11.2
Ohms 1.05

EL PASO NATURAL GAS COMPANY
SAN JUAN DIVISION
FARMINGTON, NEW MEXICO
PRODUCTION DEPARTMENT WATER ANALYSIS

Analysis No. 1-9512 Date 5-17-79

Operator EPNG Well Name SUN RAY C #1-A

Location NW 21-31-9 County SAN JUAN State NM

Field _____ Formation _____

Sampled From CPS 1366W

Date Sampled _____ By _____

Tbg. Press. _____ Csg. Press. _____ Surface Csg. Press _____

	ppm	epm		ppm	epm
Sodium	23	1	Chloride	40	1
Calcium	670	34	Bicarbonate	142	2
Magnesium	8	1	Sulfate	1575	33
Iron	PRESENT		Carbonate	0	0
H_2S	ABSENT		Hydroxide	0	0

cc: D.C.Adams
R.A.Ullrich
E.R.Paulek
J.W.McCarthy
A.M.Smith
W.B.Shropshire
File

Water at 50'

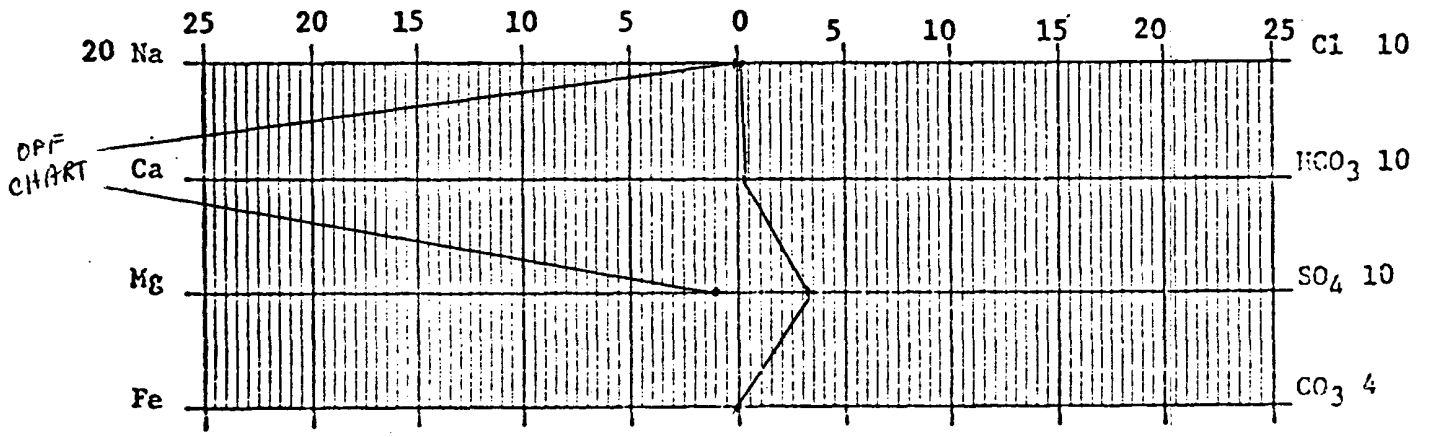
Total Solids Dissolved 2872

pH 7.5

Sp. Gr. 1.0039 at _____ 60°F

Resistivity 335 ohm-cm at 77 °F

Barnett Trujillo PZE
Chemist



Scale: epm

30-045-10493

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

Operator TENNECO Location: Unit SW Sec. 22 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced RIDDLE D #3

cps 346w

Elevation 6263' Completion Date 6/12/63 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 2500 lbs.

Depths anodes placed: 255', 249', 243', 237', 231'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

Remarks: gb #1 not a MERIDIAN well.

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.

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

DATE 6-12-63

WELL NAME Riddle No. 3-D CPS NO. 346-W

LOCATION SW¼ Sec. 22 T21N R9W

WORK ORDER NUMBER 184- 40542-50-02

ANODE HOLE DEPTH 280

TOTAL DRILLING RIG TIME 10 3/4

DRILLING TIME FOR RECTIFIER POLE HOLE 0

TYPE AND SIZE BIT USED 6¼ Rock HM 3415X

NUMBER SACKS MUD USED 0

NUMBER SACKS LOST CIRCULATION MAT'L USED 0

ANODE DEPTHS #1 255, #2 249, #3 243, #4 237 #5 231

TOTAL LBS. COKE USED 2500 25 Sacks

ANODE OUTPUTS 12.4 VOLTS, #1 3.0, #2 3.1, #3 3.7, #4 3.1 #5 3.0

TOTAL CIRCUIT RESISTANCE: VOLTS 12.0 AMPERES 7.0 OHMS 1.7

NUMBER FEET SURFACE CABLE ~~CONDUIT~~ 620

DRILLING LOG (ATTACH HERETO).

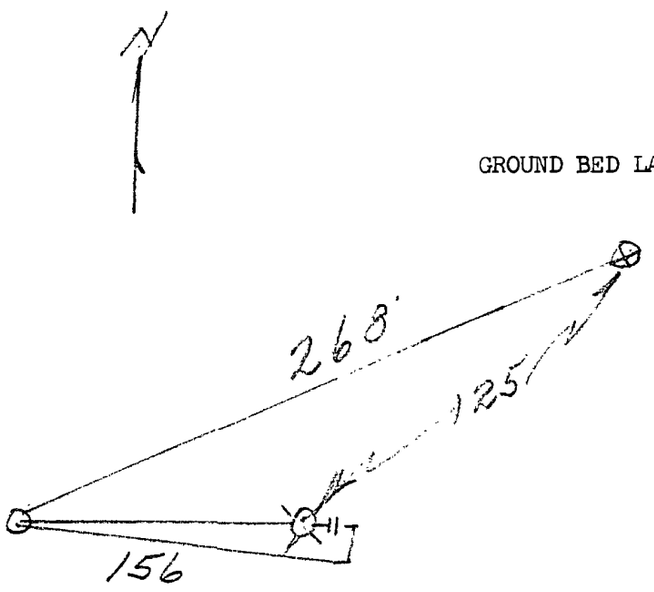
FORMATION LOG (ATTACH HERETO).

REMARKS: Static c/s 166R 600 5
Good All Rectifier 28 V 16 A Ser.# 62C6351
Note

ALL CONSTRUCTION COMPLETED

Jarrels
SIGNATURE

GROUND BED LAYOUT SKETCH



ORIGINAL & 1 COPY
ALL REPORTS

1915

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

Riddle No 3-D

LEASE Sec 22 T-31N R-9W WELL NO. CONTRACTOR L.E. Wilson RIG NO. D-6 REPORT NO. 34 New DATE June 11 & 12 1965

MORNING					DAYLIGHT					EVENING				
Driller	Total Men In Crew				Driller	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.
0	15	[illegible] shale	3415X		157	165	Shale & SS	3415X		250	280	Hd SS & sdy shale	3415X	
15	23	Sand & SS	X		165	190	Hd SS & sand	X						
23	60	Shale & SS	X		190	197	[illegible]	X						
60	157	Sand & SS	X		197	250	Hd SS & sdy shale	X						

BIT NO.		BIT NO.		BIT NO.	
SERIAL NO. 3415X	NO. DC SIZE LENG.	SERIAL NO.	NO. DC SIZE LENG.	SERIAL NO.	NO. DC SIZE LENG.
SIZE	NO. DC SIZE LENG.	SIZE	NO. DC SIZE LENG.	SIZE	NO. DC SIZE LENG.
TYPE Rock WM-3	STANDS	TYPE	STANDS	TYPE	STANDS
MAKE Walker Mac	SINGLES	MAKE	SINGLES	MAKE	SINGLES
	DOWN ON KELLY		DOWN ON KELLY		DOWN ON KELLY
	TOTAL DEPTH 280		TOTAL DEPTH		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.	
			3 loads water				Total Rig Time 10 3/4 HRS				

FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN

REMARKS – REMARKS – REMARKS –

June 11 – moved 12:30 st[illegible] Dlng 1:50 Drilled 160' Quit 5:00

June 12 – Left Bloomfield 6:00 Arrived at Rig 7:15 Drilled 120' Finished Hole 1:15

SIGNED: Toolpusher ________ Company Supervisor O.H. Daniels

30-045-10493

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

Operator TENNECO Location: Unit SW Sec. 22 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced RIDDLE D #3

cps 346w

Elevation 6263' Completion Date 1/6/67 Total Depth 440' 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. 190'

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 4440 lbs.

Depths anodes placed: 383', 377', 371', 365', 359', 322', 296', 290'

Depths vent pipes placed: 383' OF 3/4" HOSE

Vent pipe perforations: 220'

Remarks: gb #2 **not a MERIDIAN well.**

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

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

30-045-10493

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

Operator TENNECO Location: Unit SW Sec. 22 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced RIDDLE D #3

cps 346w

Elevation 6263' Completion Date 6/12/63 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 2500 lbs.

Depths anodes placed: 255', 249', 243', 237', 231'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

Remarks: gb #1 **not a MERIDIAN well.**

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.

4931

30-045-10604

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

Operator TENNECO Location: Unit NE Sec. 22 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced RIDDLE D #4

cps 392w

Elevation 6478 Completion Date 10/8/75 Total Depth 400' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

Fresh, Clear, Salty, Sulphur, Etc. 200'

Depths gas encountered: N/A

Type & amount of coke breeze used: 4900 lbs.

Depths anodes placed: 370', 300', 285', 275', 250'

Depths vent pipes placed: 370'

Vent pipe perforations: 200'

Remarks: gb #2 not a MERIDIAN well.

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST.

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 10/8/75

Well Name	Location	CPS No.
Riddle D #4	NE 22-31-9	392 W

Type & Size Bit Used	Work Order No.
6 3/4"	184-52160-19-50-2

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
400'		49 SACKS		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	370'	300'	285'	275'	250'					
Anode Output (Amps)	2.6	3.5	2.8	3.6	3.6					

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

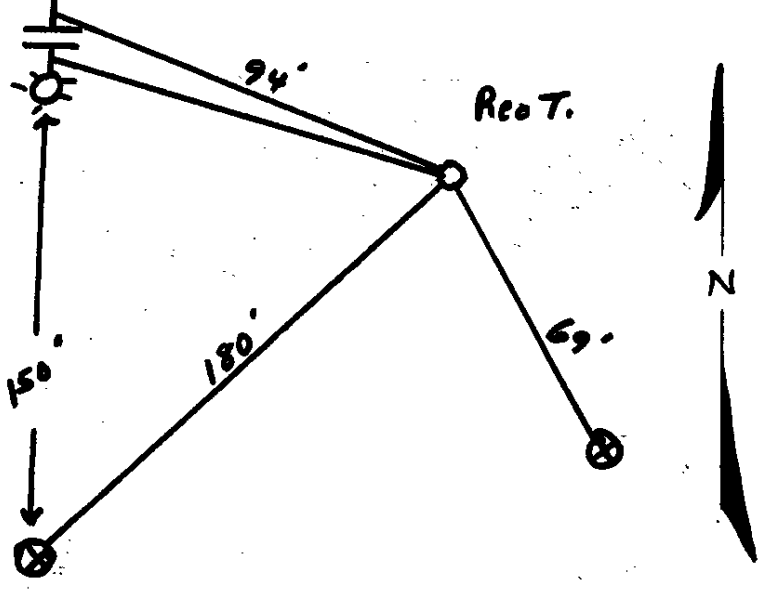
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 12 V	Amps 10 A	Ohms 1.2	1850'	

Remarks: Driller said water at 200'. Vent perforated 200', on #1 Anode. Log stopped at 400'

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

DRILLING DEPARTMENT

10-8-75 DAILY DRILLING REPORT

LEASE | WELL NO. 392 | CONTRACTOR | RIG NO. 399 | REPORT NO. | DATE 19

MORNING

Driller | Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
00	10	Sand		
10	102'	Sandstone		
102'	110'	Shale		
110'	210'	Sandstone		

BIT NO. | NO. DC ____ SIZE ____ LENG. ____
NO. DC ____ SIZE ____ LENG. ____
SERIAL NO. | STANDS
SIZE | SINGLES
TYPE | DOWN ON KELLY
MAKE | TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN
309'	310'	Shale
310'	320'	Sandstone
320'	322'	Shale
322'	420'	Sandstone
420'	—	TD

REMARKS –

DAYLIGHT

Driller | Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
210'	214'	Shale		
214'	230'	Sandstone		
230'	233'	Shale		
233'	260'	Sandstone		

BIT NO. | NO. DC ____ SIZE ____ LENG. ____
NO. DC ____ SIZE ____ LENG. ____
SERIAL NO. | STANDS
SIZE | SINGLES
TYPE | DOWN DN KELLY
MAKE | TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS –
DAMP @ 170-180
190-195
WET @ 195-200

EVENING

Driller | Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
260'	270'	Shale		
270'	290'	Sandstone		
290'	296'	Shale		
296'	309'	Sandstone		

BIT NO. | NO. DC ____ SIZE ____ LENG. ____
NO. DC ____ SIZE ____ LENG. ____
SERIAL NO. | STANDS
SIZE | SINGLES
TYPE | DOWN ON KELLY
MAKE | TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.	MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN

REMARKS –

SIGNED: Toolpusher _____ Company Supervisor _____

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Sheet ___ of ___
Date: _____
By: _____

392 W

MW		gals/mol
16	C_1	6.4
30	C_2	10.12
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	15.90
"	C_6	15.57
100	IC_7	17.5
"	C_7	17.46
114	C_8	19.39
28	CO	9.64
42	$C_3^=$	9.69

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

200 —
10 —
20 —
30 —
40 — .4 .5
50 — 1.0 — .9
60 — .2 .6
70 — 1.0 1.1 —
80 — 1.0 1.0 —
90 — 1.0 1.0
300 — 1.0 — 1.0
10 — .9 .6
20 — .2 .2
30 — .4 .2
40 — .4 .4
50 — .2 .4
60 — .4 1.1
70 — 1.2 — .8

80 — .6 .5
90 — .5 .5
400 —
10 —
20 —

1 = 370' — 1.0 — 2.6
2 = 300' — 1.2 — 3.5
3 = 285' — 1.1 — 2.8
4 = 275' — 1.4 — 3.6
5 = 250' — 1.2 — 3.6

Water at 200'
Vent perforated 200' on ±1 anode
Log stopped at 400'

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

API 30-045-22488 3318

Operator EPFS Location: Unit D Sec. 22 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced RIDDLE D Ls 4A #89865

Elevation _____ Completion Date 4-7-97 Total Depth 400 Land Type * F NM012647

Casing, Sizes, Types & Depths 8 5/8 – PVC 20'

If Casing is cemented, show amounts & types used 45 Bags Cim Type I & II

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

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

Fresh, Clear, Salty, Sulphur, Etc. —

RECEIVED
MAR - 2 1998
OIL CON. DIV.
DIST. 3

Depths gas encountered: —

Type & amount of coke breeze used: Loresco SW - 4200 lbs -

Depths anodes placed: 190 – 370

Depths vent pipes placed: 380 -

Vent pipe perforations: 200

Remarks: _____

O H Jarvis

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.

DEEP WELL GROUNDBED DATA DATE April 7, 1997

COMPANY EPFS/Amoco COUNTY San Juan STATE NM

CONTRACT NO. FC-96-1000 UNIT NO. 89865

LOCATION Riddle "D" LS 4A

GROUNDBED: DEPTH 400 FT., DIA. 7 7/8 IN., ANODES (10) 2 x 60 SHA-2

CASING: SIZE 8 IN., DEPTH 20 FT.

DEPTH FT.	DRILLER'S LOG	RESISTIVITY OHMS	RESISTIVITY AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
5	Casing						
10	"						
15	"						
20	Brown Sand						
25	"						
30	"						
35	"						
40	"		0.5				
45	"		0.7				
50	"		0.6				
55	"		0.6				
60	"		0.5				
65	"		0.6				
70	"		0.6				
75	"		0.7				
80	"		0.8				
85	"		0.8				
90	"		0.6				
95	"		0.6				
100	"		0.5				
105	"		0.8				
110	"		1.3				
115	"		1.0				
120	"		0.8				
125	"		0.7				
130	"		0.7				
135	"		0.7				
140	Blue Sandstone		0.6				
145	"		0.7				
150	"		1.0				
155	"		1.0				
160	"		0.8				
165	"		0.8				
170	"		0.7				
175	"		0.5				
180	"		0.3				
185	"		0.4				
190	Shale		2.1	10	190	2.1	4.4
195	"		1.9				
200	"		1.9				
205	"		1.9	9	205	1.9	4.4
210	"		2.1				
215	"		2.1	8	215	2.1	5.0
220	"		2.3				
225	"		2.3	7	225	2.3	5.3
230	"		2.4				
235	"		2.2	6	235	2.2	5.0
240	Shale		1.9				

TDM1350

COMPANY EPFS/Amoco DATE April 7, 1997

LOCATION Riddle "D" LS 4A UNIT NO. 89865

Depth Ft	Driller's Log	Resistivity Ohms Amps	Anode Number	Depth To Anode Top	Before Coke	After Coke
245	Shale	1.7	5	245	1.7	3.7
250	"	1.2				
255	"	0.8				
260	"	0.9				
265	"	0.8				
270	"	0.9				
275	"	1.1				
280	"	0.7				
285	"	0.7				
290	"	0.7				
295	"	0.8				
300	"	0.4				
305	"	0.4				
310	"	1.0				
315	"	1.0				
320	Sandstone & Sandy Shale	1.1				
325	"	1.3	4	325	1.2	2.7
330	"	1.1				
335	"	0.7				
340	"	0.6				
345	"	1.1				
350	"	1.5	3	350	1.5	4.1
355	"	1.9				
360	"	1.8	2	360	1.8	4.5
365	"	1.6				
370	"	2.0	1	370	2.0	4.5
375	Shale	1.9				
380	"	1.9				
385	"					
390	"					
395	"					
400	Shale					
405						
410						
415						
420						
425						
430						
435						
440						
445						
450						
455						
460						
465						
470						
475						
480						
485						
490						
495						
500						
505						
510						

TDM1350

30-045-10343

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

Operator TENNECO Location: Unit NE Sec. 27 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SCHWERDTFEGER #2

cps 344w

Elevation 6218' Completion Date 7/3/74 Total Depth 400' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

Fresh, Clear, Salty, Sulphur, Etc. WET AT 100' WATER AT 205'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 365', 355', 345', 335', 300', 290', 280', 265', 250', 235'

Depths vent pipes placed: N/A

Vent pipe perforations: 275'

Remarks: cgb #2 not a MERIDIAN well.

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

logged

Drilling Log (Attach Hereto) ☐

Completion Date 7-3-74

Well Name	Location	CPS No.
Schwerdtfeger #2	NE 27-31-9	344W

Type & Size Bit Used	Work Order No.
6¾	52099

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
400				

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	365	355	345	335	300	290	280	265	250	235
Anode Output (Amps)	3.1	4.0	4.4	3.8	3.2	3.8	3.4	3.6	3.7	4.0
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 14.0	Ohms 0.82	68'	

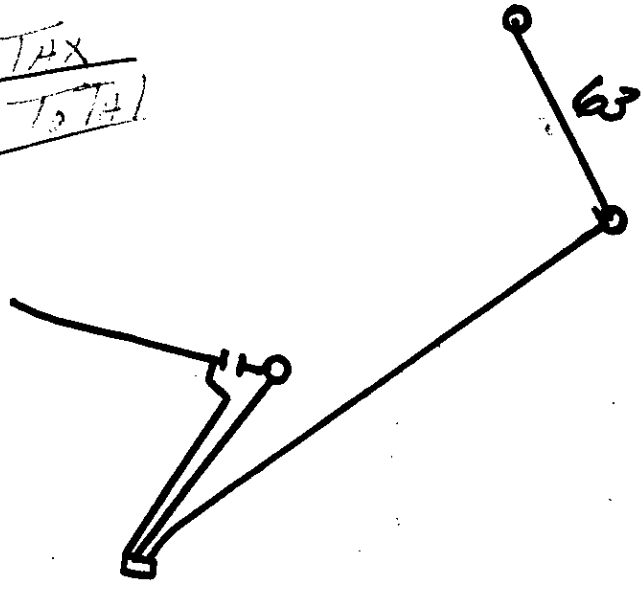
Remarks: Driller Said Wet at 100-120 - Start Inject. Water
Water Level at 205 after 30 Min.
Vent Perforated 275
Pump Coke to Surface

$ 3,409.00
27.20 Cable
$ 3,436.20
-220.00 Depth Detail
$ 3,216.20
128.55 Tax
$ 3,344.75 Total

All Construction Completed

Jarrels
(Signature)

GROUND BED LAYOUT SKETCH



EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Sheet
Date:
By:

344W X=11.7

100		280	12
			12
10		90	13
			13
20		300	12
			11
30		10	11
			9
40		20	5
			2
50		30	6
			14
60		40	19
			24
70		50	21
			21
80		60	20
			14
90		70	12
			13
200		80	26
	.6		18
10	.8	96	13
	1.0	TD 96	12
20	.9	400	
	1.0		
30	1.2		
	1.2		
40	1.2		
	1.2		
50	1.3		
	1.2		
60	1.2		
	1.2		
70	1.2		
	1.1		

Driller said wet 100-120 - wtr level at 205 after 30'

Vent. 275

Pump Cake to Surface

1	3 65	1.4	1.8	3.1
2	3 55	2.1	2.6	4.0
3	3 45	2.4	3.0	4.4
4	3 35	1.4	2.4	3.8
5	3 00	1.2	1.8	3.2
6	2 90	1.3	2.4	3.8
7	2 80	1.2	2.0	3.4
8	2 65	1.2	1.9	3.6
9	2 50	1.3	1.6	3.7
10	2 35	1.2	1.8	4.0

11.5V 140A = 0.82

STORM WATER WELL DRILLING INC.

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
WATER WELL DRILLING

CONTRACTORS
14991 W. 44TH AVENUE
GOLDEN, COLORADO 80401
PHONE (303) 278-9505

GENERAL OFFICE
14991 W. 44TH AVENUE
BAILEY OFFICE
CALL 1-838-4821

Drill GD 15W Date 7-3-74

Owner C.P.S 344W

Location
City FARMINGTON State N.M. County

From	To	Formation	Color	Hardness
0	110	Sandstone & Sandstreaks		Hard
110	140	Sandy Shale	BL	Med
140	400	Shale	BL	Hard

Injection at 100

WATER AT 205

Total Hours
Equipment Down Time
Hours Drilling
Driller Art Gladwell
Helper
Helper

C.P.S. Time
S.W.W.D.I. Time
Total Footage

Approval of
C.P.S. Engineer

30-045-11825

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

Operator TENNECO Location: Unit SW Sec. 27 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SCHWERDTFEGER #1R

cps 397w

Elevation 6070' Completion Date 6/25/75 Total Depth 200' 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 2000 lbs.

Depths anodes placed: 100', 90', 80', 70', 60'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

Remarks: gb #2 FIRST HOLE (80') CAVED **not a MERIDIAN well.**

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.

30-045-11825

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

Operator TENNECO Location: Unit SW Sec. 27 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SCHWERDTFEGER #1R

cps 397w

Elevation 6070' Completion Date 6/12/63 Total Depth 160' 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 1600 lbs.

Depths anodes placed: 105', 95', 88', 82', 76'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

Remarks: gb #1 **not a MERIDIAN well.**

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST.

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.

2934

30-045-22425

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 NW Sec. 27 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SCHWERDTFEGER #2A

cps 1257w

Elevation 6277' Completion Date 6/2/78 Total Depth 385' 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. 170' & 210'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 370', 360', 350', 340', 305', 295', 285', 265', 255', 245'

Depths vent pipes placed: 375'

Vent pipe perforations: 220'

Remarks: gb #1

RECEIVED
5-31-91
JUN 21 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.

453

30-045-22426

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. 27 Twp 31 Rng 9

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

cps 1256w

Elevation 6160' Completion Date 6/2/78 Total Depth 320' Land Type* N/A

Casing, Sizes, Types & Depths 15' OF 8" PLASTIC PIPE

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. 55'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 280', 270', 260', 250', 240', 230', 220', 155', 145', 125'

Depths vent pipes placed: 320'

Vent pipe perforations: 230'

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

Drilling Log (Attach Hereto). ☐ Completion Date 6/2/78

Well Name	Location	CPS No.
Schwerd TFeger #1A	SE 27-31-9	1256 w

Type & Size Bit Used	Work Order No.
6 3/4"	57153-21

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Matl Used	No. Sacks Mud Used
320' — 300' T.D				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	280'	270'	260'	250'	240'	230'	220'	155'	145'	125'
Anode Output (Amps)	3.9	2.9	2.5	3.2	3.5	2.5	3.0	2.9	3.0	2.7
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 11.7V	Amps 14.5A	Ohms .81Ω		

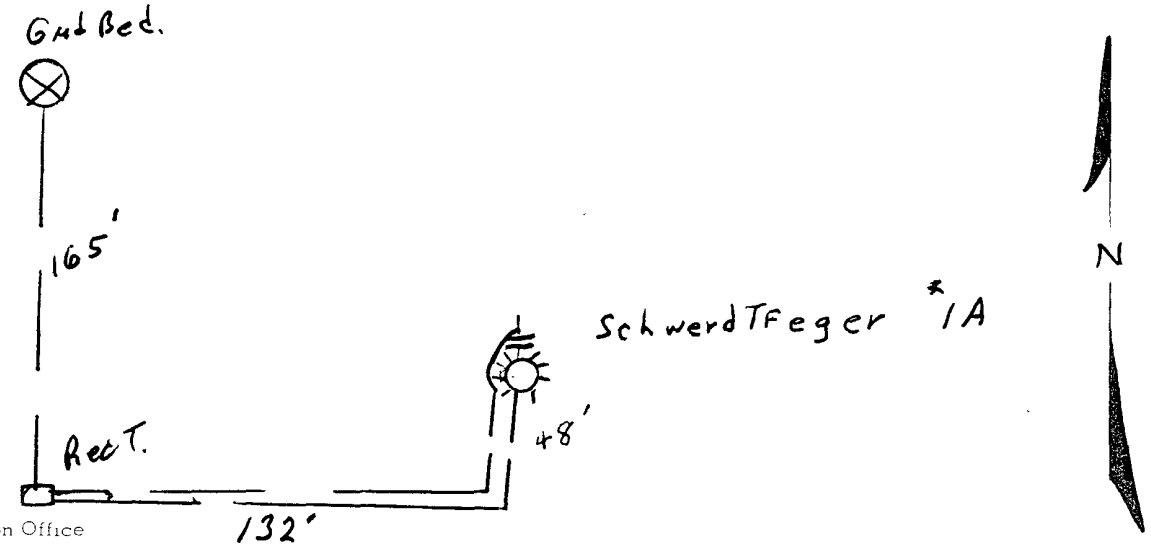
Remarks: STATIC - 600' S = .87V Driller said water at 55' Approx. 6 GAL/min. Drilled To 320', water standing in hole next A.M. at 95' INSTALLED 320' of 1" P.V.C. vent pipe, Perforated 230'.

Ditch & wire = 345'
extra wire = 180'
40/16 Rect. & stub Pole
Hole Depth = -200'

All Construction Completed

JC Slatton
(Signature)

GROUND BED LAYOUT SKETCH



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

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet ____ of ____
Date. ____
By ____
File: ____

280
230

Schwerdtfeger #1-A SE27-31-9 1256w 57153-21

DRILLED SURFACE HOLE @ 52' NEXT A.M. WATER STANDING @ 2'. 6 GALS PER MIN PRESSURE @ 230 # WITH VENT PIPE
INSTALLED 300' of VENT PIPE.
INSTALLED 15' of 8" PLASTIC IN TOP of HOLE.

MW		gals/mol
16.04	C_1	6 4
30 07	C_2	10 12
44.10	C_3	10.42
58.12	iC_4	12.38
58 12	nC_4	11 93
72.15	iC_5	13 85
72.15	nC_5	13.71
86.18	iC_6	15 50
86.18	C_6	15.57
100.21	iC_7	17 2
100 21	C_7	17 46
114 23	C_8	19 39
28 05	$C_2^=$	9 64
42.08	$C_3^=$	9 67

MISC MW		gals/mol
32.00	O_2	3 37
28 01	CO	4 19
44 01	CO_2	6 38
64 06	SO_2	5 50
34 08	H_2S	5 17
28 01	N_2	4 16
2 02	H_2	3 38

50 10 .4
1.3
60 20 1.6 (7)
1.5
70 30 1.2 (6)
1.7
80 40 1.9 (5)
1.8
90 50 1.9 (4)
1.0 1.6
100 .8 60 1.3 (3)
.6 1.5
10 .6 70 1.6 (2)
1.0 2.0
20 1.4 80 2.3 (1)
1.4 — (10) 1.7
30 1.0 90 1.4
.7 .4
40 1.0 T.D
1.6 — (9)
50 1.7
1.3 — (8)
1.3
1.0
70
80
90

(1) 280 — 2.5 — 3.9
(2) 270 — 1.9 — 2.9
(3) 260 — 1,6 — 2.5
(4) 250 — 2.3 — 3.2
(5) 240 — 2.3 — 3.5
(6) 230 — 1.4 — 2.5
(7) 220 — 2.0 — 3.0
(8) 15' — 1.8 — 2.9
(9) 10' — 1.9 — 3.0
(10) 5' — 1.6 — 2.7

11.7 V 14.5 A = .81 Ω

Form 22-2 (Rev. 1-68)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE a.p.s. WELL NO. #1256W CONTRACTOR Posey RIG NO. REPORT NO. DATE 6/2/ 19 78

MORNING

Driller Total Men In Crew

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

BIT NO. NO. DC SIZE LENG.

BIT NO. NO. DC SIZE LENG.

SER. NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.

MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN
0	5	SURFACE
5	20	SAND & silt
20	30	CLAY
30	60	SAND
60	95	SHALE
95	115	SANDY SHALE

REMARKS –

DAYLIGHT

Driller Total Men In Crew

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

BIT NO. NO. DC SIZE LENG.

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.

MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN
115	130	Blue SHALE
130	140	SANDY SHALE
140	195	Blue SHALE
195	210	SANDY SHALE
210	260	Blue SHALE
260	290	SANDY SHALE

REMARKS –

EVENING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
T.D. 320'	300'			
20 gal				

BIT NO. NO. DC SIZE LENG.

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.

MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN
290	300	Blue SHALE
300	315	SANDY SHALE
315	320'	Blue SHALE

REMARKS –

MADE Approximately 6 GAL PER MIN @ 55

WATER Sample GOOD

SIGNED: Toolpusher Company Supervisor

1- 30-045-10257
3- 30-045-22991

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. 28 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SHEETS, #1, #3

cps 341w

Elevation 6171' Completion Date 8/9/74 Total Depth 400' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

Fresh, Clear, Salty, Sulphur, Etc. 50'

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 6100 lbs.

Depths anodes placed: 360', 350', 340', 330', 320', 310', 265', 165', 145', 105'

Depths vent pipes placed: N/A

Vent pipe perforations: 320'

Remarks: gb #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.

1- 30-045-10257

3- 30-045-22991

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. 28 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SHEETS #1, #3

cps 341w

Elevation 6171' Completion Date 6/11/63 Total Depth 140' 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 1200 lbs.

Depths anodes placed: 120', 114', 108', 102', 96'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

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.

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

30-045-22876

Operator EPFS **Location: Unit** F **Sec.** 28 **Twp** 31 **Rng** 9

Name of Well/Wells or Pipeline Serviced Horton #1 Mtr # 90225

Elevation ~ **Completion Date** 6-10-97 **Total Depth** 400 **Land Type** * NM 016746

Casing, Sizes, Types & Depths 8 5/8" PVC. 20'

If Casing is cemented, show amounts & types used 6 Bags Zia Type I & II

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

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

Fresh, Clear, Salty, Sulphur, Etc. Damp @ 110-115- Wet at 190' Start w/ H2O inj

Depths gas encountered:

Type & amount of coke breeze used: Loresco SW 5200 lbs

Depths anodes placed: 145 - 370

Depths vent pipes placed: 370

Vent pipe perforations: 240

Remarks:

D H Farrel

RECEIVED
OCT 14 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.

3229

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

C.P.S 90225

Addendum

Operator E.P.F.S. **Location: Unit** G **Sec.** 28 **Twp** 31 **Rng** 9

Name of Well/Wells or Pipeline Serviced Horton #1

Elevation _____ **Completion Date** 6-11-97 **Total Depth** 400 **Land Type** * F NM-016746

Casing, Sizes, Types & Depths _____

If Casing is cemented, show amounts & types used _____

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

120 Sacks By Cementers Inc From 130'

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

Fresh, Clear, Salty, Sulphur, Etc. _____

RECEIVED
OCT 14 1997
OIL CON. DIV.
DIST. 3

Depths gas encountered: _____

Type & amount of coke breeze used: _____

Depths anodes placed: _____

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.

THE LOFTIS COMPANY

DEEP WELL GROUNDBED DATA

DATE June 10, 1997

COMPANY EPFS/Amoco COUNTY San Juan STATE NM

CONTRACT NO. FC-96-1000 UNIT NO. 90225

LOCATION Horton #1

GROUNDBED: DEPTH 400 FT., DIA. 7 7/8 IN., ANODES (15)2 x 60 SHA-2

CASING: SIZE 8 IN., DEPTH 20 FT.

DEPTH FT.	DRILLER'S LOG	RESISTIVITY OHMS	RESISTIVITY AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
5	Casing						
10	"						
15	"						
20	Sandstone						
25	"						
30	"						
35	"						
40	"						
45	"						
50	"						
55	"						
60	"						
65	"						
70	"						
75	"						
80	"						
85	"						
90	"						
95	"						
100	"		1.1				
105	"		1.3				
110	"		1.1				
115	"		0.8				
120	"		2.0				
125	Shale		2.7				
130	"		2.9				
135	"		2.6				
140	"		2.3				
145	"		2.0	15	145	2.0	5.7
150	"		2.6				
155	"		2.6	14	155	2.6	6.2
160	"		2.2				
165	"		2.2	13	165	2.2	5.6
170	"		1.8				
175	"		1.7				
180	"		1.5				
185	"		1.1				
190	"		0.8				
195	"		0.9				
200	"		1.1				
205	"		1.9	12	205	1.8	4.6
210	"		1.8				
215	"		1.9	11	215	1.8	4.5
220	"		1.0				
225	"		0.8				
230	"		0.8				
235	"		0.8				
240	Shale		0.5				

RECEIVED
OCT 14 1997
OIL CONS. DIV.
DIST. 3

TDM1350

COMPANY EPFS/Amoco DATE June 10, 1997

LOCATION Horton #1 UNIT NO. 90225

DEPTH FT	DRILLER'S LOG	RESISTIVITY OHMS	AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
245	Shale		1.3				
250	"		2.2	10	250	2.2	5.5
255	"		2.5				
260	"		2.2	9	258	2.2	5.8
265	"		2.6	8	264	2.6	6.3
270	"		2.0	7	270	2.0	5.0
275	"		1.6				
280	"		1.6				
285	"		1.2				
290	"		1.1				
295	Sandstone		1.0				
300	"		0.8				
305	"		0.7				
310	"		0.7				
315	"		0.7				
320	"		0.9				
325	"		1.1				
330	"		0.9	6	328	1.9	4.6
335	"		1.2				
340	"		2.1				
345	"		2.0	5	344	1.9	4.9
350	Shale		2.1	4	350	2.1	5.2
355	"		2.1				
360	"		2.2	3	358	2.1	5.2
365	"		2.0	2	364	2.0	4.5
370	"		2.1	1	370	2.1	4.6
375	"		1.7				
380	"		1.8				
385	"		2.4				
390	"						
395	"						
400	Shale						
405							
410							
415							
420							
425							
430							
435							
440							
445							
450							
455							
460							
465							
470							
475							
480							
485							
490							
495							
500							
505							
510							

TDM1350

1045 30-045-23124

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. 28 Twp 31 Rng 9

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

cps 1455w

Elevation 6131' Completion Date 7/31/79 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. 50' & 247' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: 45 SACKS

Depths anodes placed: 255', 245', 235', 155', 145', 135', 125', 115', 105', 95'

Depths vent pipes placed: 320'

Vent pipe perforations: 280'

Remarks: gb #1

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

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

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

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

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐ Contract #2 Completion Date 7-31-79

Well Name	Location	CPS No.
Sheets # 1-A	SE 28-31-9	1455W

Type & Size Bit Used	Work Order No.
6 3/4 10-2"x60" DuriRon	57317-21

Anode Hole Depth	Total Drilling Rig Time	Total Fuel Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
Logged 320 – 320		45 SACKS	0	0

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	255	245	235	155	145	135	125	115	105	95
Anode Output (Amps)	4.6	4.7	4.1	4.0	4.3	5.1	5.4	5.6	5.5	5.3
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 11.8	Amps 17.4	Ohms 0.68		

Remarks: Static 600'W = 0.87. Driller said water @ 50'. Drilled to 190' Next A.M. water standing @ 50'. More water @ 247'. 50 Gals Permix Installed 320' of 1" PVC vent Pipe. Perforated 280' of 1" PVC vent Pipe Slurryed 45 SACKS of Coke.

40V 16A Rectifier. Extra Cable = 220'

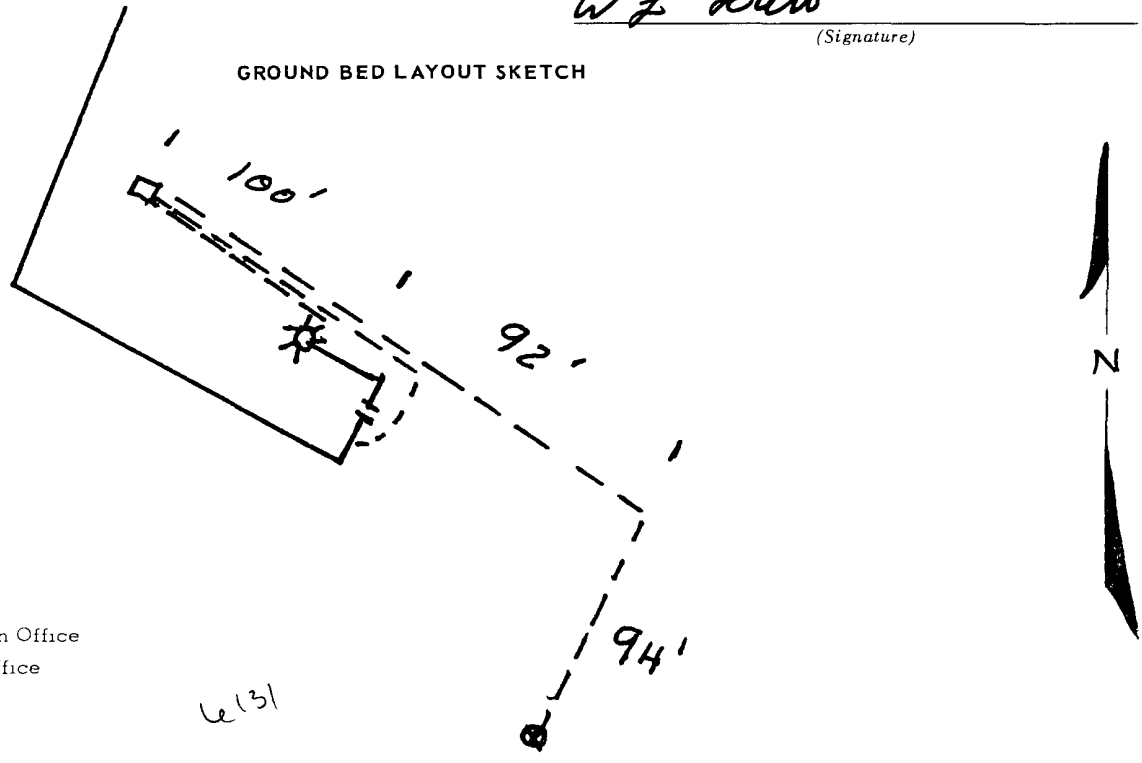
Stub Pole Ditch & Cable = 286'

Hole Credit = -180'

All Construction Completed

W F Lutts
(Signature)

GROUND BED LAYOUT SKETCH



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

le131

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE 1455W WELL NO. CONTRACTOR Contract #2 O'Briant RIG NO. 1 REPORT NO. DATE 7-31 19 79

MORNING

Driller Total Men In Crew

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

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

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

FROM	TO	TIME BREAKDOWN
0	35	Sand
35	45	Shale
45	50	Sandstone - water
50	62	Sand
62	175	Shale
175	215	Sandstone

REMARKS –

DAYLIGHT

Drill Total Men In Crew

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

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

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

FROM	TO	TIME BREAKDOWN
215	218	Shale
218	220	Sandy Shale
220	222	Sandstone
222	245	Shale
245	247	Sandstone water
247	257	Shale

REMARKS –

EVENING

Driller Total Men In Crew

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

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

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

FROM	TO	TIME BREAKDOWN
257	320	Sandstone

REMARKS –

Drilled TD 320 w/ 6¾
Logged 320 ft
Water @ 50 + 247
estimate 50 g.p.m.

SIGNED: Toolpusher Tom O'Briant Company Supervisor Kurt Westmoreland

Form 1-1 (Rev 3-77)

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ___ of ___
Date: 7-31-79
By: VF Lopez
File: ___

Sheets #1-A 1455W SE28-31-9 57317-21
Contract #2

STATIC 600' W = 0.87
40V 16A Rectisign
Stub Pole
Hole Credit = -180

EXTRA CABLE = 220'
Ditch'd Cable = 286'
10-2 "X69" DURIRON

DRILLER SAID WATER @ 50'. DRILLED TO 190' NEXT A.M. WATER STANDING @ 50'. 50 GALS PER MIN @ 24# MORENA
INSTALLED 320' OF 1" PVC VENT PIPE
PERFORATED 280' OF 1" PVC VENT PIPE
SLURRYED 45 SACKS OF COKE

7-31-79 10 HRS

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10 42
58 12	iC_4	12 38
58 12	nC_4	11 93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86 18	C_6	15.57
100 21	iC_7	17 2
100.21	C_7	17.46
114 23	C_8	19 39
28.05	$C_2^=$	9 64
42 08	$C_3^=$	9.67

MISC.

MW		gals/mol
32.00	O_2	3 37
28 01	CO	4 19
44.01	CO_2	6 38
64 06	SO_2	5 50
34 08	H_2S	5.17
28 01	N_2	4.16
2.02	H_2	3.38

50		10	.7				
			1.2				
50	2.3	20	.7				
	2.1		1.0				
70	2.1	30	1.3				
	2.0	③	1.9				
80	2.2	40	2.1				
	2.3	②	2.1				
90	2.3	50	2.3				
⑩	2.4	①	1.9				
100	2.3	60	.9	①	255	2.6	4.6
⑨	2.3		1.1	②	245	2.6	4.7
10	2.5	70	1.1	③	235	2.5	4.1
⑧	2.5		1.2	④	155	2.5	4.0
20	2.2	80	1.1	⑤	145	2.5	4.3
⑦	2.4		1.0	⑥	135	3.0	5.1
30	2.3	90	1.0	⑦	125	3.4	5.4
⑥	2.3		1.0	⑧	115	3.8	5.6
40	2.2	3.00	1.0	⑨	105	3.5	5.5
⑤	2.1		1.0	⑩	95	3.7	5.3
50	1.9	10	1.0				
④	1.9		1.0	VOLTS	11.8		
60	1.6	20		TD'S Drilled	AMPS	17.4	
	1.4				OHMS	0.68	
70	1.3	30					
	1.0						
80	.8						
	.8						
90	.8						
	.9						
2.00	.8						
	.7						

EL PASO NATURAL GAS COMPANY
SAN JUAN DIVISION
FARMINGTON, NEW MEXICO
PRODUCTION DEPARTMENT WATER ANALYSIS

Analysis No. 1-9676 Date 8-14-79

Operator EPNG Well Name SHEETZ #1A

Location SE 28-31-9 County SAN JUAN State NEW MEXICO

Field _____ Formation _____

Sampled From CPS 1455W - 50'

Date Sampled _____ By _____

Tbg. Press. _____ Csg. Press. _____ Surface Csg. Press _____

	ppm	epm		ppm	epm
Sodium	552	24	Chloride	32	1
Calcium	200	10	Bicarbonate	190	3
Magnesium	12	1	Sulfate	1500	31
Iron	PRESENT		Carbonate	0	0
H_2S	ABSENT		Hydroxide	0	0

cc: D.C.Adams
R.A.Ullrich
E.R.Paulek
J.W.McCarthy
A.M.Smith
W.B.Shropshire
File

C. B. O'Nan

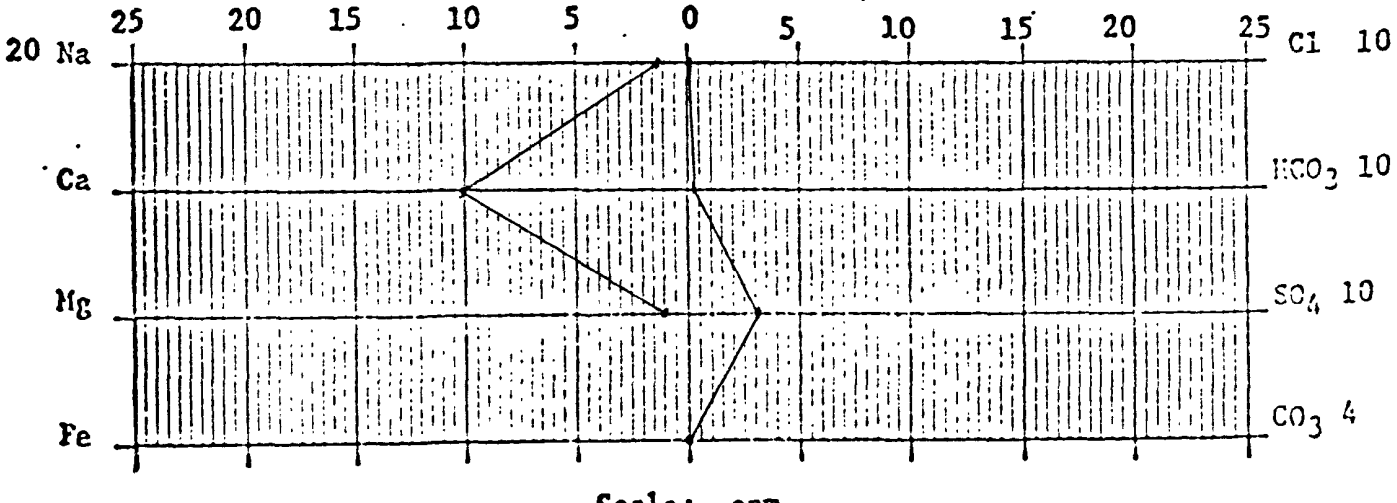
Total Solids Dissolved 2838

pH 7.9

Sp. Gr. 1.0039 at 60°F

Resistivity 300 ohm-cm at 75 °F

Chemist



Scale: epm

5114

4- 30-045-24297

250- 30-045- 26923

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

Operator MERIDIAN OIL INC. Location: Unit O Sec. 28 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced SHEETS #4, #250

cps 1987w

Elevation 6191' Completion Date 8/24/88 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. 90' & 300'

RECEIVED
MAY 31 1989
OIL CON. DIV.
DIST. 3

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 235', 225', 215', 205', 195', 185', 175', 165', 155', 145'

Depths vent pipes placed: 320'

Vent pipe perforations: 220'

Remarks: gb #1

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-07-1238 (Rev 10-82)

WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

Drilling Log (Attach Hereto) ☒ Completion Date 8-24-88

#250

CPS #	Well Name, Line or Plant	Work Order #	Static	Ins Union Check
1987W	Sheets #4 PC, " DK	53563A ✓	600NW = 1.10	☒ Good ☐ Bad

Location	Anode Size	Anode Type	Size Bit
028-31-09	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
320'	315'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	235	225	215	205	195	185	175	165	155	145
Anode Output (Amps)	4.6	4.7	4.9	5.1	5.7	5.0	5.5	4.9	5.0	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 12.08	Amps 23.4	Ohms .51		

Remarks: Static Water at 125' Installed 320' of 1" PVC vent pipe, bottom 220' perforated. D.C. power to be run from Sheets #1A

GB 4077.00
669.00

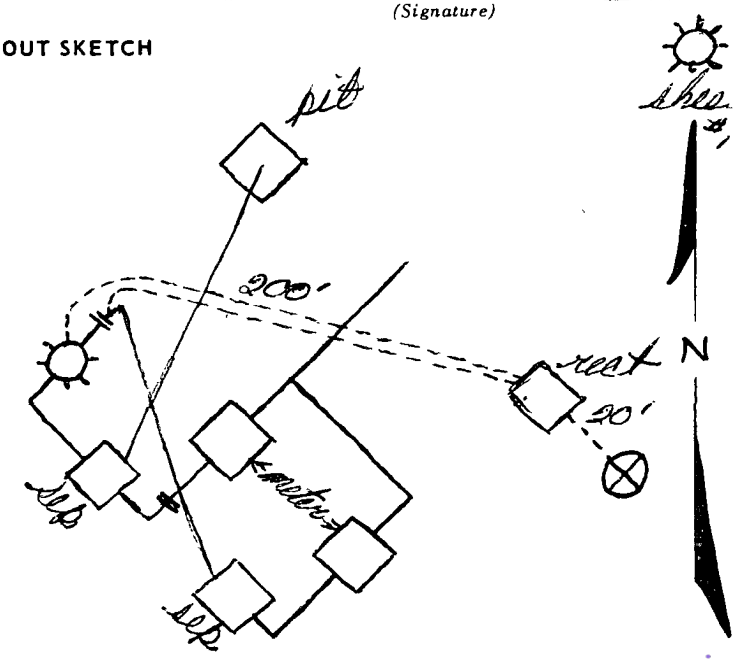
Rectifier Size: 40 V 16 A
Addn'l Depth
Depth Credit: 185' @ 3.50 - 647.50 ✓
Extra Cable: 230' @ .24 55.20 ✓
Ditch & 1 Cable: 220' @ .70 154.00 ✓
25' Meter Pole: -0-
20' Meter Pole: -0-
10' Stub Pole: 1 @ 138.50 138.50
1 Junction Box 225.00

4668.20
tax 234.41 ✓
4922.61 OK?

All Construction Completed

Calvin Rodman
(Signature)

GROUND BED LAYOUT SKETCH



6191

D. Crass DRILLING CO.

Drill No. 3

DRILLER'S WELL LOG

S P. No. Sheets # 4 Date 8-24-88

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	Shale
50	60	Sandstone
60	80	Shale
80	90	Sand -
90	110	Sandstone
110	255	Shale
255	320	Sand

Mud Bron Lime

Rock Bit Number Make

Remarks: Water @ 90' & 300'

Driller Ronnie Brown

WELL TYPE GROUNDBED DATA CPS # 1982 (J)

DATA SHEET NO: _____

COMPANY MERIDIAN Oil JOB No. 13128 DATE: 8/23/88

WELL: SHEETS No.4 PC, No.4 DK PIPELINE: _____

LOCATION: SEC 28 TWP 31N RGE. 9W CO. San Juan STATE N.M.

ELEV. _____ FT: ROTARY 320 FT: CABLE TOOL 0 FT: CASING 0

GROUNDBED: DEPTH 315 FT: DIA. 6 3/4 IN. GAS 3150 LBS. ANODES 10.2"X 60" TYPE

DEPTH FT.	DRILLER'S LOG	EXPLORING ANODE TO STRUCTURE E	I	R	NO COKE I	WITH COKE I	ANODE NO.	DEPTH TOP ANOD
30								
35								
60								
65	1-235-2.1-4.6							
70	2-225-2.1-4.7							
75	3-215-2.0-4.9							
80	4-205-2.1-5.1							
85	5-195-2.6-5.7							
90	6-185-2.4-5.0							
95	7-175-2.5-5.5							
100	8-165-2.4-4.9							
5	9-155-2.2-5.0							
10	10-145-2.0-4.2							
15								
20								
25			1.5					
30			2.3					
35			2.0					
40			1.9					
45			1.7					
50			1.9					
55			1.8					
60			2.0					
65			1.8					
70			1.7					
75			2.0					
80			1.8					
85			1.8					
90			1.9					
95			1.9					
200			1.8					
5			1.7					
10			1.6					
15			1.6					
20			1.6					
25			1.8					
30			1.6					
35			1.7					
40			1.5					
45			1.3					
50			.9					
55			.7					
60			.5					

GROUNDBED RESISTANCE: (1) VOLTS 12.08 - AMPS 23.4 = .51 OHMS

(2) VERO GROUND _____ OHMS

GENERAL CATHODIC PROTECTION SERVICES CO.

A LUKENS COMPANY

WELL TYPE GROUNDBED DATA CPS # 1987.12

DATA SHEET NO: _____

COMPANY MERIDIAN OIL JOB No. 13128 DATE: 8/23/88

WELL: SHEETS #4 PC, #4 DK PIPELINE: _____

LOCATION: SEC 28 TWP. 31N RGE. 9W CO. SAN JUAN STATE N. M.

ELEV. _____ FT: ROTARY 320 FT: CABLE TOOL -0- FT: CASING -0-

GROUNDBED: DEPTH 315 FT. DIA. 6 3/4 IN. GAS 3150 LBS. ANODES 10 2"X60" TYP

DEPTH FT.	DRILLER'S LOG	EXPLORING ANODE TO STRUCTURE E	I	R	NO COKE I	WITH COKE I	ANODE NO.	DEPT TOP ANOD
305			.6					
10			.9					
25			.7					
80			.9					
85			.6					
90			.5					
95			.5					
300			.7					
5			1.3					
10			1.0					
15								
20	TD 315							
25								
30								
35								
40								
45								
50								
55								
60								
65								
70								
75								
80								
85								
90								
95								
400								
5								
10								
15								
20								
25								
30								
35								
40								
45								

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

(2) VIBROGROUND _____ OHMS

GENERAL CATHODIC PROTECTION SERVICES CO.

A LUKENS COMPANY

3848

30-045-28647

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

Operator Meridian Oil Inc Location: Unit L Sec. 28 Twp 31 Rng 09

Name of Well/Wells or Pipeline Serviced

Sheets #1R

Elevation 6183' Completion Date 10/28/93 Total Depth 455' Land Type F

Casing Strings, Sizes, Types & Depths 10/27 Set 59' of 8" PVC Casing.

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

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

With 14 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. water at 90 feet (Clear)

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 455' with 130 bags of Asbury 218R coke breeze

Depths anodes placed: 440, 415, 405, 380, 370, 360, 350, 340, 165, 155, 145, 135, 125, 114, 109

Depths vent pipes placed: 455'

Vent pipe perforations: Bottom 370'

Remarks:

RECEIVED
JAN 31 1994
OIL CON. DIV.
DIST. 3

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

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

 30-045-10258

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

Operator TENNECO Location: Unit SW Sec. 29 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced RIDDLE C #3

cps 340w

Elevation 6311' Completion Date 7/10/74 Total Depth 440' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

Fresh, Clear, Salty, Sulphur, Etc. 120'

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

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 400', 345', 285', 265', 255', 245', 235', 225', 215', 205'

Depths vent pipes placed: N/A

Vent pipe perforations: 350'

Remarks: Cgb #2 **not a MERIDIAN well.**

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

Log 660

Drilling Log (Attach Hereto). ☐ Completion Date 7-16-74

Well Name	Location	CPS No.
Riddle C #3	Sw 29-31-9	340 w

Type & Size Bit Used	Work Order No.
6 3/4	52319

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
440				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	400	345	285	265	255	245	235	225	215	205
Anode Output (Amps)	2.1	2.3	2.8	3.4	4.0	4.6	4.3	3.7	4.0	3.2
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

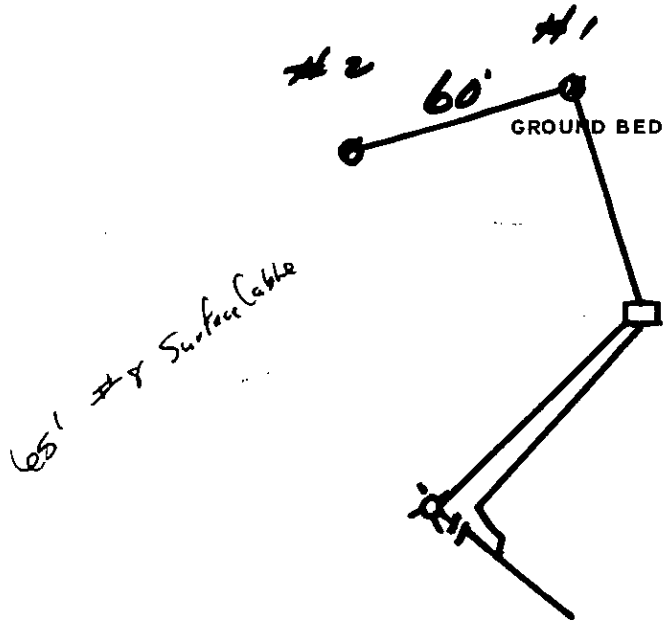
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.3	Amps 13.8	Ohms 0.82	65	

Remarks: Driller Said Wet at 50 Start injection, Water at 120'
~~Built~~ Vent Perforated 350'
Pump Coke to Surface

All Construction Completed

Jarrels
(Signature)

GROUND BED LAYOUT SKETCH



$ 3409.00
26.00 Cable
$ 3,435.00
-150.00 Legal Credit
$ 3,285.00
131.40 TAX
$ 3,416.40 TOTAL

STORM WATER WELL DRILLING INC.

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
WATER WELL DRILLING

CONTRACTORS
14991 W. 44TH AVENUE
GOLDEN, COLORADO 80401
PHONE (303) 278-9505

GENERAL OFFICE
14991 W. 44TH AVENUE
BAILEY OFFICE
CALL 1-838-4525

Drill GD-15 Date 7-10-74

Owner C.P.S # 340

Location
City Farmington State N.M County

From	To	Formation	Color	Hardness
0	15	Surface	Br	Soft
15	190	Sandstone	Br.	Hard
190	440	Sandy Shale with Streaks of clay	BL	Med.

Injection At 50'
Water zone at 120

Total Hours
Equipment Down Time
Hours Drilling
Driller Art Blackwell
Helper
Helper

C.P.S. Time
S.W.W.D.I. Time
Total Footage

Approval of
C.P.S. Engineer

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Sheet
Date:
By:

475W – X–?

340W – 7-10-74 X=55

100	2	280	6
	3		8 ✓
10	2	90	7
	8		3
20		300	2
			2
30		10	2
			5
40		20	4
			5
50	4	30	4
	4		4
60	9	40	8
	10		9 ✓
70	9	50	6
	7		6
80	7	60	5
	7		6
90	7	70	6
	7		6
200	7	80	6
	17 ✓		4
10	16	90	6
	19 ✓		6
20	18	400	8 ✓
	16 ✓		6
30	16	10	5
	18 ✓		5
40	18	20	6
	1.7 ✓		5
50	16	30	3
	13 ✓		3
60	11	1040	
	9 ✓		
70	7		
	7		

Driller Said water at
50' – Start injection
Said More water at 120
Drill TD with air

Won't Perf 350
Pump to Surface

		[illegible]	[illegible]	ok
1	400	8	9	21
2	345	9	1.1	23
3	285	8	1.2	28
4	265	9	1.5	34
5	255	1.3	2.0	40
6	245	1.7	2.4	46
7	235	1.8	2.3	4.3
8	225	1.6	2.1	3.7
9	215	1.9	2.1	4.0
10	205	1.7	1.7	3.2

82

11.3 / 13.8 = 0.82

11 04

260

60' 2 13

3231

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

30-045-26827

Operator EPFS Location: Unit NE B Sec. 29 Twp 31 Rng 9

Name of Well/Wells or Pipeline Serviced Riddle "C" Com 8 mw #92136

Elevation 6260 Completion Date 6-9-97 Total Depth 400 Land Type * P

Casing, Sizes, Types & Depths 8 5/8" PVC, 40'

If Casing is cemented, show amounts & types used 5 Bags Zia Type I & II

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

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

Fresh, Clear, Salty, Sulphur, Etc. Water @ 135-140'

RECEIVED
OCT 14 1997
OIL CON. DIV.
DIST. 3

Depths gas encountered: —

Type & amount of coke breeze used: 40 sacks SW

Depths anodes placed: 150 - 355'

Depths vent pipes placed: 360

Vent pipe perforations: 140

Remarks: Drill with air & water injection

O. A. Jarrell

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.

THE LOFTIS COMPANY

DEEP WELL GROUNDBED DATA DATE June 9, 1997

COMPANY EPFS/Amoco COUNTY San Juan STATE NM

CONTRACT NO. FC-96-1000 UNIT NO. 92136

LOCATION Riddle "C" COM #8 #97578

GROUNDBED: DEPTH 400 FT., DIA. 7 7/8 IN., ANODES (15)2 x 60 SHA-2

CASING: SIZE 8 IN., DEPTH 40 FT.

DEPTH FT.	DRILLER'S LOG	RESISTIVITY OHMS	RESISTIVITY AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
5	Casing						
10	"						
15	"						
20	"						
25	"						
30	"						
35	"						
40	Sand						
45	"						
50	"						
55	"						
60	"						
65	"						
70	"						
75	"						
80	"						
85	"						
90	"						
95	Shale						
100	"						
105	"						
110	"						
115	"						
120	"						
125	"		0.8				
130	"		0.8				
135	"		1.0				
140	"		0.9				
145	"		1.0				
150	"		2.2				
155	"		2.8				
160	"		2.0				
165	"		0.9				
170	"		0.9				
175	"		0.7				
180	"		1.1				
185	"		2.1				
190	"		1.9				
195	"		1.7				
200	"		1.6				
205	"		1.7				
210	"		1.4				
215	"		1.5				
220	"		1.3				
225	"		1.3				
230	"		1.0				
235	"		1.1				
240	Shale		0.9				

COMPANY EPFS/Amoco DATE June 9, 1997

LOCATION Riddle "C" COM #8 UNIT NO. 92136

DEPTH FT	DRILLER'S LOG	RESISTIVITY OHMS	AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
245	Sand		0.9	2	347	1.3	6.0
250	"		0.8				
255	"		0.8	1	355	1.3	5.8
260	"		0.9				
265	"		0.6				
270	"		0.5				
275	"		0.4				
280	"		0.5				
285	"		0.4				
290	"		0.3				
295	"		0.9				
300	"		1.0				
305	Shale		1.1				
310	"		1.1				
315	"		1.3				
320	"		1.5				
325	"		1.4				
330	"		1.6				
335	"		1.5				
340	"		1.4				
345	"		1.3				
350	"		1.2				
355	"		1.3				
360	"		1.1				
365	Sand & Shale		0.8				
370	"		0.6				
375	"		0.7				
380	"		0.6				
385	"		0.6				
390	"						
395	"						
400	Sand & Shale						
405							
410							
415							
420							
425							
430							
435							
440							
445							
450							
455							
460							
465							
470							
475							
480							
485							
490							
495							
500							
505							
510							

TDM1350

ENSOLUM

APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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

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

Form C-138
Revised 08/01/11

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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

PayKey:RB21200
PM: Gary Turner
AFE: N74526

2. Originating Site:
Sunray G#2C

3. Location of Material (Street Address, City, State or ULSTR):
UL P Section 21 T31N R9W; 36.878552, -107.779348

4. Source and Description of Waste:
Source: Remediation activities associated with a natural gas pipeline leak.
Description: Hydrocarbon/Condensate impacted soil associated natural gas pipeline release.
Estimated Volume (50) yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 382/9 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) 8-30-2024, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

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

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: _____
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
Sunray G #2C (09/17/24)
Ensolum Project No. 05A1226333

ENSOLUM

Photograph 1 Photograph Description: View of final excavation.	
Photograph 2 Photograph Description: View of final excavation.	
Photograph 3 Photograph Description: View of final excavation.	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Sunray G #2C (09/17/24)
Ensolum Project No. 05A1226333

ENSOLUM

Photograph 4 Photograph Description: View of the excavation final restoration.	
Photograph 5 Photograph Description: View of the excavation final restoration.	

ENSOLUM

APPENDIX E

Regulatory Correspondence

From:	Kyle Summers
To:	Landon Daniell
Subject:	FW: [EXTERNAL] Sunray G#2C - UL P Section 21 T31N R9W; 36.878552, -107.779348; NMOCD Incident # nAPP2426152565
Date:	Wednesday, September 18, 2024 9:00:00 AM
Attachments:	Outlook-pdg3wpre.png image002.png image003.png image004.png image005.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

From: Long, Thomas <tjlong@eprod.com>
Sent: Wednesday, September 18, 2024 8:59 AM
To: Kyle Summers <ksummers@ensolum.com>
Subject: FW: [EXTERNAL] Sunray G#2C - UL P Section 21 T31N R9W; 36.878552, -107.779348; NMOCD Incident # nAPP2426152565

[**EXTERNAL EMAIL**]

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

Enterprise Products

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Tuesday, September 17, 2024 2:40 PM
To: Long, Thomas <tjlong@eprod.com>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: Re: [EXTERNAL] Sunray G#2C - UL P Section 21 T31N R9W; 36.878552, -107.779348;

NMOCD Incident # nAPP2426152565

[Use caution with links/attachments]

Good afternoon 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 or from an OCD pre-approved sampling plan. For whatever reason, if the sampling timeframe is altered, please notify the OCD as soon as possible so we may adjust our schedule(s). Failure to notify the OCD of this change may result in the closure sample(s) not being accepted.

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

Regards,

Nelson Velez ● Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

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

http://www.emnrd.nm.gov/ocd

From: Long, Thomas <tjlong@eprod.com>
Sent: Tuesday, September 17, 2024 2:38 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXTERNAL] Sunray G#2C - UL P Section 21 T31N R9W; 36.878552, -107.779348; NMOCD

Incident # nAPP2426152565

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

Nelson,

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, September 18, 2024 at 9:00 a.m. at the Sunray G#2C excavation. Please acknowledge acceptance of this variance request. If you have any questions, please call or email.

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

From: OCDOnline@state.nm.us
To: Long, Thomas
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has accepted the application, Application ID: 419745
Date: Monday, January 13, 2025 7:19:31 AM

[Use caution with links/attachments]

To whom it may concern (c/o Thomas Long for Enterprise Field Services, LLC),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2426152565.

The sampling event is expected to take place:

When: 01/15/2025 @ 09:00
Where: P-21-31N-09W 0 FNL 0 FEL (36.878552,-107.779348)

Additional Information: Ensolum, LLC

Additional Instructions: This is a backfill sampling event.

36.878552,-107.779348

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

From: Velez, Nelson, EMNRD
To: Long, Thomas
Cc: Stone, Brian
Subject: Re: [EXTERNAL] Sunray G#2C- UL P Section 21 T31N R9W; 36.878552,-107.779348; NMOCD Incident # nAPP2426152565
Date: Tuesday, December 17, 2024 9:26:47 AM
Attachments: Outlook-ub20g2v1.png

[Use caution with links/attachments]

Good morning Tom,

Your 90-day time extension request is approved. Remediation Due date has been updated to March 17, 2025.

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.nm.gov/ocd

From: Long, Thomas <tjlong@eprod.com>
Sent: Tuesday, December 17, 2024 8:47 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXTERNAL] Sunray G#2C- UL P Section 21 T31N R9W; 36.878552,-107.779348; NMOCD Incident # nAPP2426152565

Nelson,

This email is a variance request for the 90-day closure report requirement submittal for the Sunray G#2C- UL P Section 21 T31N R9W; 36.878552,-107.779348; NMOCD Incident # nAPP2426152565 release. The original due date for the closure report submittal is December 17, 2024. Enterprise requests time extension of an additional 90 days for a new submittal due date of March 17, 2025. The reason for the time extension request is that third party contractor preparing the report does not have all the disposal documentation from the land farm facility and Enterprise internal review is required. Please acknowledge acceptance of this request.

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

logo

ENSOLUM

APPENDIX F

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Sunray G #2C (09/17/24)
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	09.18.24	C	10	<0.019	<0.037	<0.037	<0.075	ND	<3.7	<9.9	<50	ND	<60
S-2	09.18.24	C	10	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<10	<50	ND	<60
S-3	09.18.24	C	2 to 10	<0.021	<0.041	<0.041	<0.082	ND	<4.1	<9.7	<48	ND	<60
S-4	09.18.24	C	0 to 10	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.8	<49	ND	<60
S-5	09.18.24	C	0 to 10	<0.020	<0.040	<0.040	<0.081	ND	<4.0	<9.3	<47	ND	<60
S-6	09.18.24	C	3 to 10	<0.034	<0.068	<0.068	0.40	0.40	13	<8.8	<44	13	<59
S-7	09.18.24	C	3 to 10	<0.021	<0.042	<0.042	<0.084	ND	<4.2	<9.9	<49	ND	<60
S-8	09.18.24	C	0 to 3	<0.023	<0.046	<0.046	0.33	0.33	7.4	<9.6	<48	7.4	<60
S-9	09.18.24	C	0 to 10	<0.021	<0.043	<0.043	0.094	0.094	<4.3	<9.9	<50	ND	<60
S-10	09.18.24	C	0 to 2	<0.024	<0.048	<0.048	0.32	0.32	5.6	<9.8	<49	5.6	<60
Backfill Composite Soil Sample													
BF-1	01.15.25	C	BF	<0.018	<0.036	<0.036	<0.072	ND	<3.6	<9.6	<48	ND	<60

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

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

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

NE = Not established

mg/kg = milligrams per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

BF = Backfill Sample

ENSOLUM

APPENDIX G

Laboratory Data Sheets & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kyle Summers
Ensolum
606 S Rio Grande
Suite A
Aztec, New Mexico 87410

Generated 10/1/2024 9:29:32 AM

JOB DESCRIPTION

Sunray G#2 C (8/27/24)

JOB NUMBER

885-12104-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
10/1/2024 9:29:32 AM

Authorized for release by
John Caldwell, Project Manager
john.caldwell@et.eurofinsus.com
(505)345-3975

Client: Ensolum
Project/Site: Sunray G#2 C (8/27/24)

Laboratory Job ID: 885-12104-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum Job ID: 885-12104-1
Project: Sunray G#2 C (8/27/24)

Job ID: 885-12104-1 Eurofins Albuquerque

Job Narrative
885-12104-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 9/19/2024 7:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.3°C.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-1
Lab Sample ID: 885-12104-1
Date Collected: 09/18/24 09:10
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		3.7		mg/Kg		09/19/24 08:47	09/19/24 11:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*35 - 166*	*09/19/24 08:47*	*09/19/24 11:38*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.019		mg/Kg		09/19/24 08:47	09/19/24 11:38	1
Ethylbenzene	ND		0.037		mg/Kg		09/19/24 08:47	09/19/24 11:38	1
Toluene	ND		0.037		mg/Kg		09/19/24 08:47	09/19/24 11:38	1
Xylenes, Total	ND		0.075		mg/Kg		09/19/24 08:47	09/19/24 11:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*48 - 145*	*09/19/24 08:47*	*09/19/24 11:38*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		09/19/24 08:44	09/19/24 10:35	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/19/24 08:44	09/19/24 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*09/19/24 08:44*	*09/19/24 10:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 10:01	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-2
Date Collected: 09/18/24 09:20
Date Received: 09/19/24 07:00

Lab Sample ID: 885-12104-2
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		3.8		mg/Kg		09/19/24 08:47	09/19/24 12:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*35 - 166*	*09/19/24 08:47*	*09/19/24 12:00*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.019		mg/Kg		09/19/24 08:47	09/19/24 12:00	1
Ethylbenzene	ND		0.038		mg/Kg		09/19/24 08:47	09/19/24 12:00	1
Toluene	ND		0.038		mg/Kg		09/19/24 08:47	09/19/24 12:00	1
Xylenes, Total	ND		0.077		mg/Kg		09/19/24 08:47	09/19/24 12:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*48 - 145*	*09/19/24 08:47*	*09/19/24 12:00*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/19/24 08:44	09/19/24 10:47	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/19/24 08:44	09/19/24 10:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*09/19/24 08:44*	*09/19/24 10:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 10:14	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-3
Lab Sample ID: 885-12104-3
Date Collected: 09/18/24 09:30
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.1		mg/Kg		09/19/24 08:47	09/19/24 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*35 - 166*	*09/19/24 08:47*	*09/19/24 12:22*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.021		mg/Kg		09/19/24 08:47	09/19/24 12:22	1
Ethylbenzene	ND		0.041		mg/Kg		09/19/24 08:47	09/19/24 12:22	1
Toluene	ND		0.041		mg/Kg		09/19/24 08:47	09/19/24 12:22	1
Xylenes, Total	ND		0.082		mg/Kg		09/19/24 08:47	09/19/24 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*48 - 145*	*09/19/24 08:47*	*09/19/24 12:22*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		09/19/24 08:44	09/19/24 10:59	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		09/19/24 08:44	09/19/24 10:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*09/19/24 08:44*	*09/19/24 10:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 10:52	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-4
Lab Sample ID: 885-12104-4
Date Collected: 09/18/24 09:40
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		3.9		mg/Kg		09/19/24 08:47	09/19/24 12:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*35 - 166*	*09/19/24 08:47*	*09/19/24 12:44*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg		09/19/24 08:47	09/19/24 12:44	1
Ethylbenzene	ND		0.039		mg/Kg		09/19/24 08:47	09/19/24 12:44	1
Toluene	ND		0.039		mg/Kg		09/19/24 08:47	09/19/24 12:44	1
Xylenes, Total	ND		0.078		mg/Kg		09/19/24 08:47	09/19/24 12:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*48 - 145*	*09/19/24 08:47*	*09/19/24 12:44*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		09/19/24 08:44	09/19/24 11:11	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		09/19/24 08:44	09/19/24 11:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*09/19/24 08:44*	*09/19/24 11:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 11:05	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-5
Lab Sample ID: 885-12104-5
Date Collected: 09/18/24 09:50
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.0		mg/Kg		09/19/24 08:47	09/19/24 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*35 - 166*	*09/19/24 08:47*	*09/19/24 13:05*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg		09/19/24 08:47	09/19/24 13:05	1
Ethylbenzene	ND		0.040		mg/Kg		09/19/24 08:47	09/19/24 13:05	1
Toluene	ND		0.040		mg/Kg		09/19/24 08:47	09/19/24 13:05	1
Xylenes, Total	ND		0.081		mg/Kg		09/19/24 08:47	09/19/24 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*48 - 145*	*09/19/24 08:47*	*09/19/24 13:05*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		09/19/24 08:44	09/19/24 11:23	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		09/19/24 08:44	09/19/24 11:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*09/19/24 08:44*	*09/19/24 11:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 11:18	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-6
Lab Sample ID: 885-12104-6
Date Collected: 09/18/24 10:00
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**13**		6.8		mg/Kg		09/19/24 10:26	09/19/24 13:27	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*207*	*S1+*	*35 - 166*	*09/19/24 10:26*	*09/19/24 13:27*	*2*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.034		mg/Kg		09/19/24 10:26	09/19/24 13:27	2
Ethylbenzene	ND		0.068		mg/Kg		09/19/24 10:26	09/19/24 13:27	2
Toluene	ND		0.068		mg/Kg		09/19/24 10:26	09/19/24 13:27	2
Xylenes, Total	**0.40**		0.14		mg/Kg		09/19/24 10:26	09/19/24 13:27	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*48 - 145*	*09/19/24 10:26*	*09/19/24 13:27*	*2*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.8		mg/Kg		09/19/24 08:44	09/19/24 11:35	1
Motor Oil Range Organics [C28-C40]	ND		44		mg/Kg		09/19/24 08:44	09/19/24 11:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*09/19/24 08:44*	*09/19/24 11:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		59		mg/Kg		09/19/24 07:48	09/19/24 11:31	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-7
Lab Sample ID: 885-12104-7
Date Collected: 09/18/24 10:10
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.2		mg/Kg		09/19/24 10:26	09/19/24 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*	*09/19/24 10:26*	*09/19/24 13:48*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.021		mg/Kg		09/19/24 10:26	09/19/24 13:48	1
Ethylbenzene	ND		0.042		mg/Kg		09/19/24 10:26	09/19/24 13:48	1
Toluene	ND		0.042		mg/Kg		09/19/24 10:26	09/19/24 13:48	1
Xylenes, Total	ND		0.084		mg/Kg		09/19/24 10:26	09/19/24 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*48 - 145*	*09/19/24 10:26*	*09/19/24 13:48*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		09/19/24 08:44	09/19/24 11:47	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		09/19/24 08:44	09/19/24 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*09/19/24 08:44*	*09/19/24 11:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 11:44	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-8
Lab Sample ID: 885-12104-8
Date Collected: 09/18/24 10:20
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**7.4**		4.6		mg/Kg		09/19/24 10:26	09/19/24 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*174*	*S1+*	*35 - 166*	*09/19/24 10:26*	*09/19/24 14:10*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/19/24 10:26	09/19/24 14:10	1
Ethylbenzene	ND		0.046		mg/Kg		09/19/24 10:26	09/19/24 14:10	1
Toluene	ND		0.046		mg/Kg		09/19/24 10:26	09/19/24 14:10	1
Xylenes, Total	**0.33**		0.092		mg/Kg		09/19/24 10:26	09/19/24 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*48 - 145*	*09/19/24 10:26*	*09/19/24 14:10*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		09/19/24 08:44	09/19/24 11:59	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		09/19/24 08:44	09/19/24 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*110*		*62 - 134*	*09/19/24 08:44*	*09/19/24 11:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 11:57	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-9
Lab Sample ID: 885-12104-9
Date Collected: 09/18/24 10:30
Matrix: Solid
Date Received: 09/19/24 07:00

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.3		mg/Kg		09/19/24 10:26	09/19/24 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*35 - 166*	*09/19/24 10:26*	*09/19/24 14:32*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.021		mg/Kg		09/19/24 10:26	09/19/24 14:32	1
Ethylbenzene	ND		0.043		mg/Kg		09/19/24 10:26	09/19/24 14:32	1
Toluene	ND		0.043		mg/Kg		09/19/24 10:26	09/19/24 14:32	1
Xylenes, Total	**0.094**		0.085		mg/Kg		09/19/24 10:26	09/19/24 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*48 - 145*	*09/19/24 10:26*	*09/19/24 14:32*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		09/19/24 08:44	09/19/24 12:11	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/19/24 08:44	09/19/24 12:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*105*		*62 - 134*	*09/19/24 08:44*	*09/19/24 12:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 12:09	20

Client Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-10
Date Collected: 09/18/24 10:40
Date Received: 09/19/24 07:00

Lab Sample ID: 885-12104-10
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**5.6**		4.8		mg/Kg		09/19/24 10:26	09/19/24 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*148*		*35 - 166*	*09/19/24 10:26*	*09/19/24 14:54*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/19/24 10:26	09/19/24 14:54	1
Ethylbenzene	ND		0.048		mg/Kg		09/19/24 10:26	09/19/24 14:54	1
Toluene	ND		0.048		mg/Kg		09/19/24 10:26	09/19/24 14:54	1
Xylenes, Total	**0.32**		0.096		mg/Kg		09/19/24 10:26	09/19/24 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*48 - 145*	*09/19/24 10:26*	*09/19/24 14:54*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		09/19/24 08:44	09/19/24 12:23	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		09/19/24 08:44	09/19/24 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*09/19/24 08:44*	*09/19/24 12:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		09/19/24 07:48	09/19/24 12:22	20

QC Sample Results

Client: Ensolum
Project/Site: Sunray G#2 C (8/27/24)

Job ID: 885-12104-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-12441/1-A
Matrix: Solid
Analysis Batch: 12588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12441

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		09/18/24 08:48	09/19/24 10:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*35 - 166*	*09/18/24 08:48*	*09/19/24 10:33*	*1*

Lab Sample ID: LCS 885-12534/3-A
Matrix: Solid
Analysis Batch: 12588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12534

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*207*		*35 - 166*

Lab Sample ID: 885-12104-1 MS
Matrix: Solid
Analysis Batch: 12588

Client Sample ID: S-1
Prep Type: Total/NA
Prep Batch: 12534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		18.7	18.1		mg/Kg		97	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*208*		*35 - 166*

Lab Sample ID: 885-12104-1 MSD
Matrix: Solid
Analysis Batch: 12588

Client Sample ID: S-1
Prep Type: Total/NA
Prep Batch: 12534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		18.7	18.1		mg/Kg		97	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*207*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-12441/1-A
Matrix: Solid
Analysis Batch: 12589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12441

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/18/24 08:48	09/19/24 10:33	1
Ethylbenzene	ND		0.050		mg/Kg		09/18/24 08:48	09/19/24 10:33	1
Toluene	ND		0.050		mg/Kg		09/18/24 08:48	09/19/24 10:33	1
Xylenes, Total	ND		0.10		mg/Kg		09/18/24 08:48	09/19/24 10:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*48 - 145*	*09/18/24 08:48*	*09/19/24 10:33*	*1*

QC Sample Results

Client: Ensolum
Project/Site: Sunray G#2 C (8/27/24)

Job ID: 885-12104-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: LCS 885-12534/3-A
Matrix: Solid
Analysis Batch: 12589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12534

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.04		mg/Kg		104	70 - 130		
Ethylbenzene			1.00	1.06		mg/Kg		106	70 - 130		
Toluene			1.00	1.05		mg/Kg		105	70 - 130		
Xylenes, Total			3.00	3.17		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*48 - 145*

Lab Sample ID: 885-12104-2 MS
Matrix: Solid
Analysis Batch: 12589

Client Sample ID: S-2
Prep Type: Total/NA
Prep Batch: 12534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.768	0.774		mg/Kg		101	70 - 130		
Ethylbenzene	ND		0.768	0.789		mg/Kg		103	70 - 130		
Toluene	ND		0.768	0.785		mg/Kg		102	70 - 130		
Xylenes, Total	ND		2.30	2.36		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*48 - 145*

Lab Sample ID: 885-12104-2 MSD
Matrix: Solid
Analysis Batch: 12589

Client Sample ID: S-2
Prep Type: Total/NA
Prep Batch: 12534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.768	0.776		mg/Kg		101	70 - 130	0	20
Ethylbenzene	ND		0.768	0.781		mg/Kg		102	70 - 130	1	20
Toluene	ND		0.768	0.776		mg/Kg		101	70 - 130	1	20
Xylenes, Total	ND		2.30	2.32		mg/Kg		100	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*48 - 145*

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-12532/1-A
Matrix: Solid
Analysis Batch: 12539

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12532

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/19/24 08:44	09/19/24 10:11	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/19/24 08:44	09/19/24 10:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*09/19/24 08:44*	*09/19/24 10:11*	*1*

QC Sample Results

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 885-12532/2-A
Matrix: Solid
Analysis Batch: 12539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12532

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	54.5		mg/Kg		109	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*105*		*62 - 134*

Lab Sample ID: 885-12104-10 MS
Matrix: Solid
Analysis Batch: 12539

Client Sample ID: S-10
Prep Type: Total/NA
Prep Batch: 12532

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		49.2	46.2		mg/Kg		94	44 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*

Lab Sample ID: 885-12104-10 MSD
Matrix: Solid
Analysis Batch: 12539

Client Sample ID: S-10
Prep Type: Total/NA
Prep Batch: 12532

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		49.9	45.8		mg/Kg		92	44 - 136	1	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*108*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-12524/1-A
Matrix: Solid
Analysis Batch: 12575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12524

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		09/19/24 07:48	09/19/24 08:04	1

Lab Sample ID: LCS 885-12524/2-A
Matrix: Solid
Analysis Batch: 12575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12524

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	31.2		mg/Kg		104	90 - 110		

QC Association Summary

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

GC VOA

Prep Batch: 12441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-12441/1-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 12534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	5035	
885-12104-2	S-2	Total/NA	Solid	5035	
885-12104-3	S-3	Total/NA	Solid	5035	
885-12104-4	S-4	Total/NA	Solid	5035	
885-12104-5	S-5	Total/NA	Solid	5035	
885-12104-6	S-6	Total/NA	Solid	5035	
885-12104-7	S-7	Total/NA	Solid	5035	
885-12104-8	S-8	Total/NA	Solid	5035	
885-12104-9	S-9	Total/NA	Solid	5035	
885-12104-10	S-10	Total/NA	Solid	5035	
LCS 885-12534/3-A	Lab Control Sample	Total/NA	Solid	5035	
885-12104-1 MS	S-1	Total/NA	Solid	5035	
885-12104-1 MSD	S-1	Total/NA	Solid	5035	
885-12104-2 MS	S-2	Total/NA	Solid	5035	
885-12104-2 MSD	S-2	Total/NA	Solid	5035	

Analysis Batch: 12588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	8015M/D	12534
885-12104-2	S-2	Total/NA	Solid	8015M/D	12534
885-12104-3	S-3	Total/NA	Solid	8015M/D	12534
885-12104-4	S-4	Total/NA	Solid	8015M/D	12534
885-12104-5	S-5	Total/NA	Solid	8015M/D	12534
885-12104-6	S-6	Total/NA	Solid	8015M/D	12534
885-12104-7	S-7	Total/NA	Solid	8015M/D	12534
885-12104-8	S-8	Total/NA	Solid	8015M/D	12534
885-12104-9	S-9	Total/NA	Solid	8015M/D	12534
885-12104-10	S-10	Total/NA	Solid	8015M/D	12534
MB 885-12441/1-A	Method Blank	Total/NA	Solid	8015M/D	12441
LCS 885-12534/3-A	Lab Control Sample	Total/NA	Solid	8015M/D	12534
885-12104-1 MS	S-1	Total/NA	Solid	8015M/D	12534
885-12104-1 MSD	S-1	Total/NA	Solid	8015M/D	12534

Analysis Batch: 12589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	8021B	12534
885-12104-2	S-2	Total/NA	Solid	8021B	12534
885-12104-3	S-3	Total/NA	Solid	8021B	12534
885-12104-4	S-4	Total/NA	Solid	8021B	12534
885-12104-5	S-5	Total/NA	Solid	8021B	12534
885-12104-6	S-6	Total/NA	Solid	8021B	12534
885-12104-7	S-7	Total/NA	Solid	8021B	12534
885-12104-8	S-8	Total/NA	Solid	8021B	12534
885-12104-9	S-9	Total/NA	Solid	8021B	12534
885-12104-10	S-10	Total/NA	Solid	8021B	12534
MB 885-12441/1-A	Method Blank	Total/NA	Solid	8021B	12441
LCS 885-12534/3-A	Lab Control Sample	Total/NA	Solid	8021B	12534

QC Association Summary

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

GC VOA (Continued)

Analysis Batch: 12589 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-2 MS	S-2	Total/NA	Solid	8021B	12534
885-12104-2 MSD	S-2	Total/NA	Solid	8021B	12534

GC Semi VOA

Prep Batch: 12532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	SHAKE	
885-12104-2	S-2	Total/NA	Solid	SHAKE	
885-12104-3	S-3	Total/NA	Solid	SHAKE	
885-12104-4	S-4	Total/NA	Solid	SHAKE	
885-12104-5	S-5	Total/NA	Solid	SHAKE	
885-12104-6	S-6	Total/NA	Solid	SHAKE	
885-12104-7	S-7	Total/NA	Solid	SHAKE	
885-12104-8	S-8	Total/NA	Solid	SHAKE	
885-12104-9	S-9	Total/NA	Solid	SHAKE	
885-12104-10	S-10	Total/NA	Solid	SHAKE	
MB 885-12532/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-12532/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-12104-10 MS	S-10	Total/NA	Solid	SHAKE	
885-12104-10 MSD	S-10	Total/NA	Solid	SHAKE	

Analysis Batch: 12539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	8015M/D	12532
885-12104-2	S-2	Total/NA	Solid	8015M/D	12532
885-12104-3	S-3	Total/NA	Solid	8015M/D	12532
885-12104-4	S-4	Total/NA	Solid	8015M/D	12532
885-12104-5	S-5	Total/NA	Solid	8015M/D	12532
885-12104-6	S-6	Total/NA	Solid	8015M/D	12532
885-12104-7	S-7	Total/NA	Solid	8015M/D	12532
885-12104-8	S-8	Total/NA	Solid	8015M/D	12532
885-12104-9	S-9	Total/NA	Solid	8015M/D	12532
885-12104-10	S-10	Total/NA	Solid	8015M/D	12532
MB 885-12532/1-A	Method Blank	Total/NA	Solid	8015M/D	12532
LCS 885-12532/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	12532
885-12104-10 MS	S-10	Total/NA	Solid	8015M/D	12532
885-12104-10 MSD	S-10	Total/NA	Solid	8015M/D	12532

HPLC/IC

Prep Batch: 12524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	300_Prep	
885-12104-2	S-2	Total/NA	Solid	300_Prep	
885-12104-3	S-3	Total/NA	Solid	300_Prep	
885-12104-4	S-4	Total/NA	Solid	300_Prep	
885-12104-5	S-5	Total/NA	Solid	300_Prep	
885-12104-6	S-6	Total/NA	Solid	300_Prep	
885-12104-7	S-7	Total/NA	Solid	300_Prep	
885-12104-8	S-8	Total/NA	Solid	300_Prep	
885-12104-9	S-9	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

HPLC/IC (Continued)

Prep Batch: 12524 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-10	S-10	Total/NA	Solid	300_Prep	
MB 885-12524/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-12524/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 12575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12104-1	S-1	Total/NA	Solid	300.0	12524
885-12104-2	S-2	Total/NA	Solid	300.0	12524
885-12104-3	S-3	Total/NA	Solid	300.0	12524
885-12104-4	S-4	Total/NA	Solid	300.0	12524
885-12104-5	S-5	Total/NA	Solid	300.0	12524
885-12104-6	S-6	Total/NA	Solid	300.0	12524
885-12104-7	S-7	Total/NA	Solid	300.0	12524
885-12104-8	S-8	Total/NA	Solid	300.0	12524
885-12104-9	S-9	Total/NA	Solid	300.0	12524
885-12104-10	S-10	Total/NA	Solid	300.0	12524
MB 885-12524/1-A	Method Blank	Total/NA	Solid	300.0	12524
LCS 885-12524/2-A	Lab Control Sample	Total/NA	Solid	300.0	12524

Lab Chronicle

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-1
Lab Sample ID: 885-12104-1
Date Collected: 09/18/24 09:10
Matrix: Solid
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 11:38
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 11:38
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 10:35
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 10:01

Client Sample ID: S-2
Lab Sample ID: 885-12104-2
Date Collected: 09/18/24 09:20
Matrix: Solid
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 12:00
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 12:00
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 10:47
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 10:14

Client Sample ID: S-3
Lab Sample ID: 885-12104-3
Date Collected: 09/18/24 09:30
Matrix: Solid
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 12:22
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 12:22
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 10:59
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 10:52

Client Sample ID: S-4
Lab Sample ID: 885-12104-4
Date Collected: 09/18/24 09:40
Matrix: Solid
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 12:44

Lab Chronicle

Client: Ensolum Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-4 Lab Sample ID: 885-12104-4

Date Collected: 09/18/24 09:40 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 12:44
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 11:11
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 11:05

Client Sample ID: S-5 Lab Sample ID: 885-12104-5

Date Collected: 09/18/24 09:50 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 13:05
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 08:47
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 13:05
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 11:23
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 11:18

Client Sample ID: S-6 Lab Sample ID: 885-12104-6

Date Collected: 09/18/24 10:00 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8015M/D		2	12588	AT	EET ALB	09/19/24 13:27
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8021B		2	12589	AT	EET ALB	09/19/24 13:27
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 11:35
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 11:31

Client Sample ID: S-7 Lab Sample ID: 885-12104-7

Date Collected: 09/18/24 10:10 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 13:48
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 13:48

Lab Chronicle

Client: Ensolum Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-7 Lab Sample ID: 885-12104-7

Date Collected: 09/18/24 10:10 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 11:47
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 11:44

Client Sample ID: S-8 Lab Sample ID: 885-12104-8

Date Collected: 09/18/24 10:20 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 14:10
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 14:10
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 11:59
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 11:57

Client Sample ID: S-9 Lab Sample ID: 885-12104-9

Date Collected: 09/18/24 10:30 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 14:32
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 14:32
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 12:11
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 12:09

Client Sample ID: S-10 Lab Sample ID: 885-12104-10

Date Collected: 09/18/24 10:40 **Matrix: Solid**
Date Received: 09/19/24 07:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8015M/D		1	12588	AT	EET ALB	09/19/24 14:54
Total/NA	Prep	5035			12534	AT	EET ALB	09/19/24 10:26
Total/NA	Analysis	8021B		1	12589	AT	EET ALB	09/19/24 14:54
Total/NA	Prep	SHAKE			12532	KR	EET ALB	09/19/24 08:44
Total/NA	Analysis	8015M/D		1	12539	KR	EET ALB	09/19/24 12:23

Lab Chronicle

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Client Sample ID: S-10
Date Collected: 09/18/24 10:40
Date Received: 09/19/24 07:00

Lab Sample ID: 885-12104-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			12524	JT	EET ALB	09/19/24 07:48
Total/NA	Analysis	300.0		20	12575	JT	EET ALB	09/19/24 12:22

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Ensolum
Job ID: 885-12104-1
Project/Site: Sunray G#2 C (8/27/24)

Laboratory: Eurofins Albuquerque

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	NM100001	02-26-25

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: ksummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Sunray G#2 C (08/27/24)

Project #: SEE NOTES

Project Manager: K Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No chucky

# of Coolers: 1

Cooler Temp(Including CF): 4.4 - 0.1 = 4.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABOR
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 871
Tel. 505-345-3975 Fax 505-345-4107

885-12104 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9/18/24	910	S	S-1	1 4oz jar	Cool	1	X	X					X			
	920	S	S-2			2	X	X					X			
	930	S	S-3			3	X	X					X			
	940	S	S-4			4	X	X					X			
	950	S	S-5			5	X	X					X			
	1000	S	S-6			6	X	X					X			
	1010	S	S-7			7	X	X					X			
	1020	S	S-8			8	X	X					X			
	1030	S	S-9			9	X	X					X			
	1040	S	S-10			10	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/18/24	1410				9/18/24	1410
9/18/24	1714			courier	9/19/24	7:00

Remarks:
PM Tom Long
RB21200
N74526

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

Login Sample Receipt Checklist

Client: Ensolum Job Number: 885-12104-1

Login Number: 12104 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kyle Summers
Ensolum
606 S Rio Grande
Suite A
Aztec, New Mexico 87410

Generated 1/22/2025 3:50:18 PM

JOB DESCRIPTION

Sunray G #2C

JOB NUMBER

885-18481-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
1/22/2025 3:50:18 PM

Authorized for release by
John Caldwell, Project Manager
john.caldwell@et.eurofinsus.com
(505)345-3975

Client: Ensolum
Project/Site: Sunray G #2C

Laboratory Job ID: 885-18481-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 885-18481-1
Project/Site: Sunray G #2C

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: Sunray G #2C

Job ID: 885-18481-1

Job ID: 885-18481-1 Eurofins Albuquerque

Job Narrative
885-18481-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 1/16/2025 7:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -2.2°C.

Gasoline Range Organics
Method 8015D_GRO: Surrogate 4-Bromofluorobenzene recovery for the following samples were outside control limits: (LCS 885-19406/2-A), (885-18480-A-1-A) and (885-18480-A-1-B MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: Sunray G #2C

Job ID: 885-18481-1

Client Sample ID: BF-1

Date Collected: 01/15/25 09:00
Date Received: 01/16/25 07:10

Lab Sample ID: 885-18481-1

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		3.6		mg/Kg		01/16/25 08:27	01/16/25 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*35 - 166*	*01/16/25 08:27*	*01/16/25 12:19*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.018		mg/Kg		01/16/25 08:27	01/16/25 12:19	1
Ethylbenzene	ND		0.036		mg/Kg		01/16/25 08:27	01/16/25 12:19	1
Toluene	ND		0.036		mg/Kg		01/16/25 08:27	01/16/25 12:19	1
Xylenes, Total	ND		0.072		mg/Kg		01/16/25 08:27	01/16/25 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*	*01/16/25 08:27*	*01/16/25 12:19*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		01/16/25 08:40	01/16/25 11:46	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		01/16/25 08:40	01/16/25 11:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*01/16/25 08:40*	*01/16/25 11:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		01/16/25 09:58	01/16/25 11:27	20

QC Sample Results

Client: Ensolum
Project/Site: Sunray G #2C

Job ID: 885-18481-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-19406/1-A
Matrix: Solid
Analysis Batch: 19407

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19406

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		01/16/25 08:27	01/16/25 10:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*01/16/25 08:27*	*01/16/25 10:43*	*1*

Lab Sample ID: LCS 885-19406/2-A
Matrix: Solid
Analysis Batch: 19407

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19406

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	22.3		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*195*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-19406/1-A
Matrix: Solid
Analysis Batch: 19408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19406

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		01/16/25 08:27	01/16/25 10:43	1
Ethylbenzene	ND		0.050		mg/Kg		01/16/25 08:27	01/16/25 10:43	1
Toluene	ND		0.050		mg/Kg		01/16/25 08:27	01/16/25 10:43	1
Xylenes, Total	ND		0.10		mg/Kg		01/16/25 08:27	01/16/25 10:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*48 - 145*	*01/16/25 08:27*	*01/16/25 10:43*	*1*

Lab Sample ID: LCS 885-19406/3-A
Matrix: Solid
Analysis Batch: 19408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19406

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.09		mg/Kg		109	70 - 130		
Ethylbenzene			1.00	1.10		mg/Kg		110	70 - 130		
Toluene			1.00	1.10		mg/Kg		110	70 - 130		
Xylenes, Total			3.00	3.24		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*48 - 145*

QC Sample Results

Client: Ensolum
Project/Site: Sunray G #2C

Job ID: 885-18481-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 885-18481-1 MS
Matrix: Solid
Analysis Batch: 19408

Client Sample ID: BF-1
Prep Type: Total/NA
Prep Batch: 19406

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.718	0.726		mg/Kg		101	70 - 130
Ethylbenzene	ND		0.718	0.739		mg/Kg		103	70 - 130
Toluene	ND		0.718	0.747		mg/Kg		104	70 - 130
Xylenes, Total	ND		2.15	2.19		mg/Kg		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*48 - 145*

Lab Sample ID: 885-18481-1 MSD
Matrix: Solid
Analysis Batch: 19408

Client Sample ID: BF-1
Prep Type: Total/NA
Prep Batch: 19406

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.718	0.713		mg/Kg		99	70 - 130	2	20
Ethylbenzene	ND		0.718	0.739		mg/Kg		103	70 - 130	0	20
Toluene	ND		0.718	0.727		mg/Kg		101	70 - 130	3	20
Xylenes, Total	ND		2.15	2.20		mg/Kg		102	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*48 - 145*

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-19409/1-A
Matrix: Solid
Analysis Batch: 19335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19409

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		01/16/25 08:40	01/16/25 11:14	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		01/16/25 08:40	01/16/25 11:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*01/16/25 08:40*	*01/16/25 11:14*	*1*

Lab Sample ID: LCS 885-19409/2-A
Matrix: Solid
Analysis Batch: 19335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19409

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	47.4		mg/Kg		95	60 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*

QC Sample Results

Client: Ensolum
Project/Site: Sunray G #2C

Job ID: 885-18481-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 885-18481-1 MS
Matrix: Solid
Analysis Batch: 19335

Client Sample ID: BF-1
Prep Type: Total/NA
Prep Batch: 19409

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		46.1	46.9		mg/Kg		102	44 - 136

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*

Lab Sample ID: 885-18481-1 MSD
Matrix: Solid
Analysis Batch: 19335

Client Sample ID: BF-1
Prep Type: Total/NA
Prep Batch: 19409

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		48.2	49.6		mg/Kg		103	44 - 136	6	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 885-19411/3
Matrix: Solid
Analysis Batch: 19411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.529		mg/L		106	50 - 150

Lab Sample ID: MB 885-19417/1-A
Matrix: Solid
Analysis Batch: 19411

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19417

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		01/16/25 09:58	01/16/25 10:46	1

Lab Sample ID: LCS 885-19417/2-A
Matrix: Solid
Analysis Batch: 19411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.8		mg/Kg		98	90 - 110

QC Association Summary

Client: Ensolum
Job ID: 885-18481-1
Project/Site: Sunray G #2C

GC VOA

Prep Batch: 19406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	5035	
MB 885-19406/1-A	Method Blank	Total/NA	Solid	5035	
LCS 885-19406/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-19406/3-A	Lab Control Sample	Total/NA	Solid	5035	
885-18481-1 MS	BF-1	Total/NA	Solid	5035	
885-18481-1 MSD	BF-1	Total/NA	Solid	5035	

Analysis Batch: 19407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	8015M/D	19406
MB 885-19406/1-A	Method Blank	Total/NA	Solid	8015M/D	19406
LCS 885-19406/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	19406

Analysis Batch: 19408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	8021B	19406
MB 885-19406/1-A	Method Blank	Total/NA	Solid	8021B	19406
LCS 885-19406/3-A	Lab Control Sample	Total/NA	Solid	8021B	19406
885-18481-1 MS	BF-1	Total/NA	Solid	8021B	19406
885-18481-1 MSD	BF-1	Total/NA	Solid	8021B	19406

GC Semi VOA

Analysis Batch: 19335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	8015M/D	19409
MB 885-19409/1-A	Method Blank	Total/NA	Solid	8015M/D	19409
LCS 885-19409/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	19409
885-18481-1 MS	BF-1	Total/NA	Solid	8015M/D	19409
885-18481-1 MSD	BF-1	Total/NA	Solid	8015M/D	19409

Prep Batch: 19409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	SHAKE	
MB 885-19409/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-19409/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-18481-1 MS	BF-1	Total/NA	Solid	SHAKE	
885-18481-1 MSD	BF-1	Total/NA	Solid	SHAKE	

HPLC/IC

Analysis Batch: 19411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	300.0	19417
MB 885-19417/1-A	Method Blank	Total/NA	Solid	300.0	19417
LCS 885-19417/2-A	Lab Control Sample	Total/NA	Solid	300.0	19417
MRL 885-19411/3	Lab Control Sample	Total/NA	Solid	300.0	

Prep Batch: 19417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-18481-1	BF-1	Total/NA	Solid	300_Prep	
MB 885-19417/1-A	Method Blank	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Ensolum
Job ID: 885-18481-1
Project/Site: Sunray G #2C

HPLC/IC (Continued)

Prep Batch: 19417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-19417/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Lab Chronicle

Client: Ensolum
Job ID: 885-18481-1
Project/Site: Sunray G #2C

Client Sample ID: BF-1
Lab Sample ID: 885-18481-1

Date Collected: 01/15/25 09:00
Matrix: Solid
Date Received: 01/16/25 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			19406	AT	EET ALB	01/16/25 08:27
Total/NA	Analysis	8015M/D		1	19407	JP	EET ALB	01/16/25 12:19
Total/NA	Prep	5035			19406	AT	EET ALB	01/16/25 08:27
Total/NA	Analysis	8021B		1	19408	JP	EET ALB	01/16/25 12:19
Total/NA	Prep	SHAKE			19409	EM	EET ALB	01/16/25 08:40
Total/NA	Analysis	8015M/D		1	19335	EM	EET ALB	01/16/25 11:46
Total/NA	Prep	300_Prep			19417	JT	EET ALB	01/16/25 09:58
Total/NA	Analysis	300.0		20	19411	JT	EET ALB	01/16/25 11:27

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Ensolum
Job ID: 885-18481-1
Project/Site: Sunray G #2C

Laboratory: Eurofins Albuquerque

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	NM100001	02-25-25

Chain-of-Custody Record

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

885-18481 COC

Client: Ensolum, LLC
Mailing Address: 606 S. Rio Grande, Suite A Aztec, NM 87410
Phone #:
email or Fax#: KSummers@ensolum.com
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: ☐ Standard ☒ Rush 100% (Same Day)
Project Name: Sunray G #2C
Project #: SEE NOTES
Project Manager: K. Summers
Sampler: L. Daniel
On Ice: ~~☐ Yes~~ ☐ No
# of Coolers: 1 (Yes)
Cooler Temp(including CF): -7.2-0=-7.2 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE~~ / ~~TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl, F, Br, NO_3, NO_2, PO_4, SO_4)	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
~~1/15/25~~ 1/14/25	9:00	S	BF-1	1 4oz jar	Cool		X	X					X			

Analysis Request

Date: 1/15/25 Time: 1707 Relinquished by: [signature]
Received by: [signature] Via: Date Time: 1/15/25 1707

Date: 1/15/25 Time: 1744 Relinquished by: [signature]
Received by: [signature] Via: courier Date Time: 1/16/25 7:10

Remarks: Not Frozen yn 1/16/25
Tom Long
RB21200
N74526

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

Login Sample Receipt Checklist

Client: Ensolum Job Number: 885-18481-1

Login Number: 18481 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Samples not Frozen
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2426152565**
Incident Name	**NAPP2426152565 SUNRAY G#2C @ 0**
Incident Type	**Natural Gas Release**
Incident Status	**Reclamation Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	SUNRAY G#2C
Date Release Discovered	09/17/2024
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	No
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: 50 MCF | Recovered: 0 MCF | Lost: 50 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.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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	None
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: 09/25/2024

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
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	Between 100 and 200 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 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 100 (ft.)
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)	13
GRO+DRO (EPA SW-846 Method 8015M)	13
BTEX (EPA SW-846 Method 8021B or 8260B)	0.4
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	09/17/2024
On what date will (or did) the final sampling or liner inspection occur	01/15/2025
On what date will (or was) the remediation complete(d)	01/15/2025
What is the estimated surface area (in square feet) that will be reclaimed	528
What is the estimated volume (in cubic yards) that will be reclaimed	382
What is the estimated surface area (in square feet) that will be remediated	528
What is the estimated volume (in cubic yards) that will be remediated	382
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.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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 #2 [fEEM0112336756]
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: 03/10/2025
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.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**419745**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**01/15/2025**
What was the (estimated) number of samples that were to be gathered	**1**
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	528
What was the total volume (cubic yards) remediated	382
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	528
What was the total volume (in cubic yards) reclaimed	382
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: 03/10/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	528
What was the total volume of replacement material (in cubic yards) for this site	382
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	07/01/2025
Summarize any additional reclamation activities not included by answers (above)	None
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 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: 03/10/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.	
Requesting a restoration complete approval with this submission	No
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 440617
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	6/9/2025