Enterprise Products

ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

May 23, 2024

OCD Website

EMNRD Oil Conservation Division
Aztec District III Office
Attn: Nelson Velez
1000 Rio Brazos Road
Aztec, NM 87410

RE: Closure Report
Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station
San Juan County, NM

Mr. Velez:

Enterprise Field Services, LLC is submitting the Closure Report for the Hart Canyon #1 Compressor Station release that occurred on February 26, 2024.

If you have questions or require additional information, please contact our field representative, Thomas Long at (505) 599-2286 or Brian Stone, Field Environmental Manager at (970) 263-3020.

Thank you,

Jon E. Fields
Director, Field Environmental

/bjm
Attachment

P.O. BOX 4324
HOUSTON, TEXAS 77210-4324
713.381.6500

1100 LOUISIANA STREET
HOUSTON, TEXAS 77002-5227
www.enterpriseproducts.com

ENSOLUM

Site Characterization Report and Deferment Request

Property:

Hart Canyon #1 Compressor Station (02/26/24)
Unit Letter D, S29 T31N R10W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2405737852

May 21, 2024

Ensolum Project No. 05A1226310

Prepared for:

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

Prepared by:

Landon Daniell
Staff Geologist

Kyle Summers
Senior Managing Geologist

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LIST OF APPENDICES

1.0 INTRODUCTION

This report documents the soil remediation and soil delineation activities conducted at the Hart Canyon #1 Compressor Station site, referred to hereinafter as the "Site".

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Hart Canyon #1 Compressor Station (02/26/24)
NM EMNRD OCD Incident ID No.	NAPP2405737852
Location:	36.73019° North, 107.96524° West Unit Letter D, Section 29, Township 31 North, Range 10 West San Juan County, New Mexico
Property:	United State Bureau of Land Management
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On February 26, 2024, Enterprise personnel identified a release of hydrocarbon liquids from a broken valve at the Hart Canyon #1 compressor station. These liquids mixed with additional liquids on the compressor skid and overflowed the containment, impacting soil adjacent to the compressor pad. Enterprise subsequently replaced the broken valve. On February 26, 2024, Enterprise initiated activities to remediate the petroleum hydrocarbon impact. Enterprise determined the release was "reportable" and 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 remediation activities was to remove on-Site soils with COC concentrations exceeding the applicable New Mexico EMNRD OCD closure criteria. Additionally, the objective of the vertical delineation activities was to further evaluate the extent of hydrocarbon impact to soil at the Site.

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, and numerous PODs were identified in the adjacent PLSS sections. The average depth to water for the PODs is 49 feet below grade surface (bgs). The closest POD (SJ-04328-POD9) is approximately 0.87 miles north of the site and approximately 88 feet higher in elevation than the Site. The recorded depth to water for this POD is 20 feet bgs (**Figure A**, **Appendix B**).

- Four cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the same PLSS section as the Site, and twelve cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in adjacent PLSS sections. These CPWs are depicted on **Figure B** (**Appendix B**). Documentation for the cathodic protection well located near the Atlantic A #8 production pad indicates a depth to water of 75 feet bgs. This cathodic protection well is located approximately 392 feet north of the Site and is approximately 8 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Atlantic A #7A and #12 production pads indicate a depth to water of approximately 23 feet bgs. This cathodic protection well is located approximately 0.40 miles south of the Site and is approximately 76 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Atlantic A #7, #10, and #210 production pads indicate a depth to water of approximately 60 feet bgs. This cathodic protection well is located approximately 0.64 miles southwest of the Site and is approximately 32 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Lambe #1A and #4 production pads indicate a depth to water of approximately 90 feet bgs. This cathodic protection well is located approximately 0.64 miles west of the Site and is approximately 123 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 approximately 90 feet south of an unnamed ephemeral wash and approximately 250 north of Hart Canyon 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**).

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

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

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

Based on available information Enterprise estimates the depth to water at the Site to be less than 50 feet bgs, 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 EXCAVATION ACTIVITIES

On February 26, 2020, Enterprise initiated activities to facilitate the removal of petroleum hydrocarbon impacted soil at the Site. During the remediation and corrective action activities, Halo Services, Inc. provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final primary excavation measured approximately 30 feet long and 15 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 4 feet bgs. The final flow-path excavation measured approximately 40 feet long and 5 feet wide at the maximum extents. The maximum depth of the flow-path excavation measured approximately 0.5 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated sandy silt overlying silty sand.

Approximately 89 cubic yards (yd^3) of petroleum hydrocarbon-affected soils and 45 barrels (bbls) of hydro-excavation soil cuttings and water 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 depicts approximate soil sample locations and depicts the approximate dimensions of the excavations with respect to the compressor pad (**Appendix A**). Photographic documentation of the field activities is included in **Appendix D**.

3.1 Soil Sampling Program

Ensolum field screened 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 9 composite samples (S-1 through S-7, FP-1, and FP-2), one grab sample (GS-1), and 3 hand-auger samples (HA-1 (7.5' to 8'), HA-1 (8' to 8.5'), and HA-1 (8.5' to 9')) for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft^2) sample area or less per

guidelines outlined in Section D of 19.15.29.12 NMAC. Hand tools and a hand-auger were utilized to obtain fresh sample aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event

On March 1, 2024, the first sampling event was performed at the Site. Although the New Mexico EMNRD OCD was notified of the sampling event, no representative was present during sampling activities. Composite soil samples S-1 (3.5' to 4') and S-2 (3.5' to 4') were collected from the floor of the excavation. Composite soil samples S-3 (0'-4'), S-4 (0' to 4'), and S-5 (0' to 3.5') were collected from the walls of the excavation. A sample was not collected from the west wall because the concrete footing of the compressor pad extends the entire length and depth of the excavation along that wall. Composite soil sample FP-1 (0.25') was collected from the flow-path. The analytical results from composite soil samples S-1 and FP-1 indicated TPH concentrations exceeding the applicable New Mexico EMNRD OCD closure criteria. Based on this information, Enterprise extended the excavation, and the soils associated with composite samples S-1 and FP-1 were removed and transported to the Envirotech landfarm for disposal/remediation.

Second Sampling Event

On March 6, 2024, the second sampling event was performed at the Site. The New Mexico EMNRD OCD was notified of the sampling event although no OCD representative was present during sampling activities. Composite soil samples S-6 ((3.5' to 4') at the impacted floor, northwest corner) and S-7 ((3.5' to 4.5') to replace the S-1 sample that exhibited a slight TPH exceedance) were collected from the floor of the excavation. Composite soil sample FP-2 (0.25' to 0.5') was collected from the flow-path to replace sample FP-1. The analytical result from composite soil sample S-6 (3.5' to 4') indicated TPH concentrations exceeding the applicable New Mexico EMNRD OCD closure criteria. Due to safety concerns associated with the depth of the excavation adjacent to the compressor pad, and concerns regarding the structural support of the equipment, Enterprise suspended further excavation adjacent to the compressor pad.

Third Sampling Event

On March 14, 2024, the third sampling event was performed at the Site. The New Mexico EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. One grab soil sample GS-1 (0.5') was collected from the north wall of the excavation, from a small area of stained soil (see photograph 10 (**Appendix D**)) just beneath the thin concrete pad above the north wall as illustrated in Figure 3 (**Appendix A**). To evaluate the vertical extent of petroleum hydrocarbon impact, Enterprise elected to advance one soil boring in the impacted area of the excavation floor, adjacent to the compressor pad. Hand-auger soil samples HA-1 (7.5' to 8' (as measured from grade surface)), HA-1 (8' to 8.5'), and HA-1 (8.5' to 9') were collected from the soil boring. The analytical result from grab soil sample GS-1 (0.5') indicated TPH concentrations exceeding the applicable New Mexico EMNRD OCD closure criteria at the small, stained area under the concrete pad.

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) (formerly Hall Environmental Analysis Laboratory, Inc.) of Albuquerque, NM, under proper chain-of-custody procedures.

3.2 Soil Laboratory Analytical Methods

The composite soil samples were analyzed for BTEX using United States (U.S.) Environmental Protection Agency (EPA) SW-846 Method 8021 or 8260; TPH GRO/DRO/MRO using U.S. EPA SW-846 Method 8015; and chlorides using U.S. EPA Method 300.0.

A summary of the analytes, sample type, number of samples, and U.S. EPA or other approved methods is presented in the following table:

Analytes	Sample Type	No. of Samples	Method
BTEX	Soil	13	SW-846 8021/8260
TPH GRO/DRO/MRO	Soil	13	SW-846 8015
Chlorides	Soil	13	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 E**.

3.3 Soil Data Evaluation

Ensolum compared the benzene, total 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-7, FP-1, and FP-2), grab sample (GS-1), and soil boring samples (HA-1 (7.5' to 8'), HA-1 (8' to 8.5'), and HA-1 (8.5' to 9')) to the applicable New Mexico EMNRD OCD closure criteria. The soils associated with composite soil samples S-1 and FP-1 were removed from the Site, and therefore, not included in the following discussion. The analytical data from these remediation activities is presented in **Table 1** (**Appendix F**).

- The laboratory analytical results for composite soil samples HA-1 (7.5' to 8') and HA-1 (8' to 8.5') indicate benzene concentrations of 0.021 mg/kg and 0.026 mg/kg, respectively, which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for all other composite samples collected from soils remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analytical results for composite soil sample GS-1 indicate a total BTEX concentration of 230 mg/kg, which exceeds the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for composite soil samples S-2, S-5, S-6, HA-1 (7.5' to 8'), and HA-1 (8' to 8.5') indicate total BTEX concentrations ranging from 0.28 mg/kg (S-5) to 17 mg/kg (S-6), which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for all other composite 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 applicable New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil samples S-6 and GS-1 indicate total combined TPH GRO/DRO/MRO concentrations of 720 mg/kg and 42,000 mg/kg, respectively, which exceed the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for composite soil samples S-2, S-5, and HA-1 (7.5' to 8') indicate total combined TPH GRO/DRO/MRO concentrations of 7.1 mg/kg, 5.0 mg/kg, and 4.7 mg/kg, respectively, which do not exceed the applicable New Mexico EMNRD OCD closure criteria

of 100 mg/kg. The laboratory analytical results for all other composite 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 applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for composite soil sample S-3 indicate a chloride concentration of 100 mg/kg, which does not exceed the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for all other composite samples collected from soils remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg.

4.0 REMEDIATION and RECLAMATION

The excavation was backfilled with imported fill and then contoured to the surrounding grade. Based on information provided herein, Enterprise requests the deferment of final remediation, reclamation, and revegetation until after the facility is decommissioned to avoid damaging existing structures/appurtenances at the facility. At that time, Enterprise will perform final remediation, final reclamation, and revegetation, in accordance with 19.15.29.12 and 19.15.29.13 NMAC.

5.0 FINDINGS

Findings based on remediation and delineation activities that were implemented at the are as follows:

- Nine composite soil samples, one grab sample, and three soil-boring samples were collected from the Site. Based on laboratory analytical results and field screening, a small, stained area of soil on the upper north wall of the excavation (under the concrete pad) and a small area (see Figure 3, Appendix A) on the northwest corner of the excavation floor (from approximately 4’ to 7.5’ bgs) exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria. The soils in the remaining portions of the excavation exhibit COC concentrations below the New Mexico EMNRD OCD closure criteria.

- Approximately 89 yd^3 of petroleum hydrocarbon affected soils and 45 bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm for disposal/remediation. The excavation was backfilled with imported fill from the Envirotech landfarm.

- Based on the information provided herein, Enterprise requests deferment of final remediation and reclamation for the areas identified on **Figure 3** (**Appendix A**) and on Photograph 10 (**Appendix D**) until after the facilities or affected portions of the facilities are decommissioned, to avoid damaging existing structures/appurtenances at the facilities. Enterprise estimates, based on known, relevant data, that less than 2 yd^3 of petroleum hydrocarbon affected soil associated with the release remains in place near the compressor pad.

6.0 RECOMMENDATION

Ensolum offers the following recommendations based on the available data:

- Pursuant to Paragraph (2) of Subsection C of 19.15.29.12 NMAC Enterprise requests deferment of final remediation, reclamation, and revegetation at the Site to address the soil

requirements of Paragraph (1) of Subsection D of 19.15.29.13 NMAC until after the facility is decommissioned, to avoid damaging existing structures/appurtenances.

7.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

7.1 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).

7.2 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.

7.3 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.

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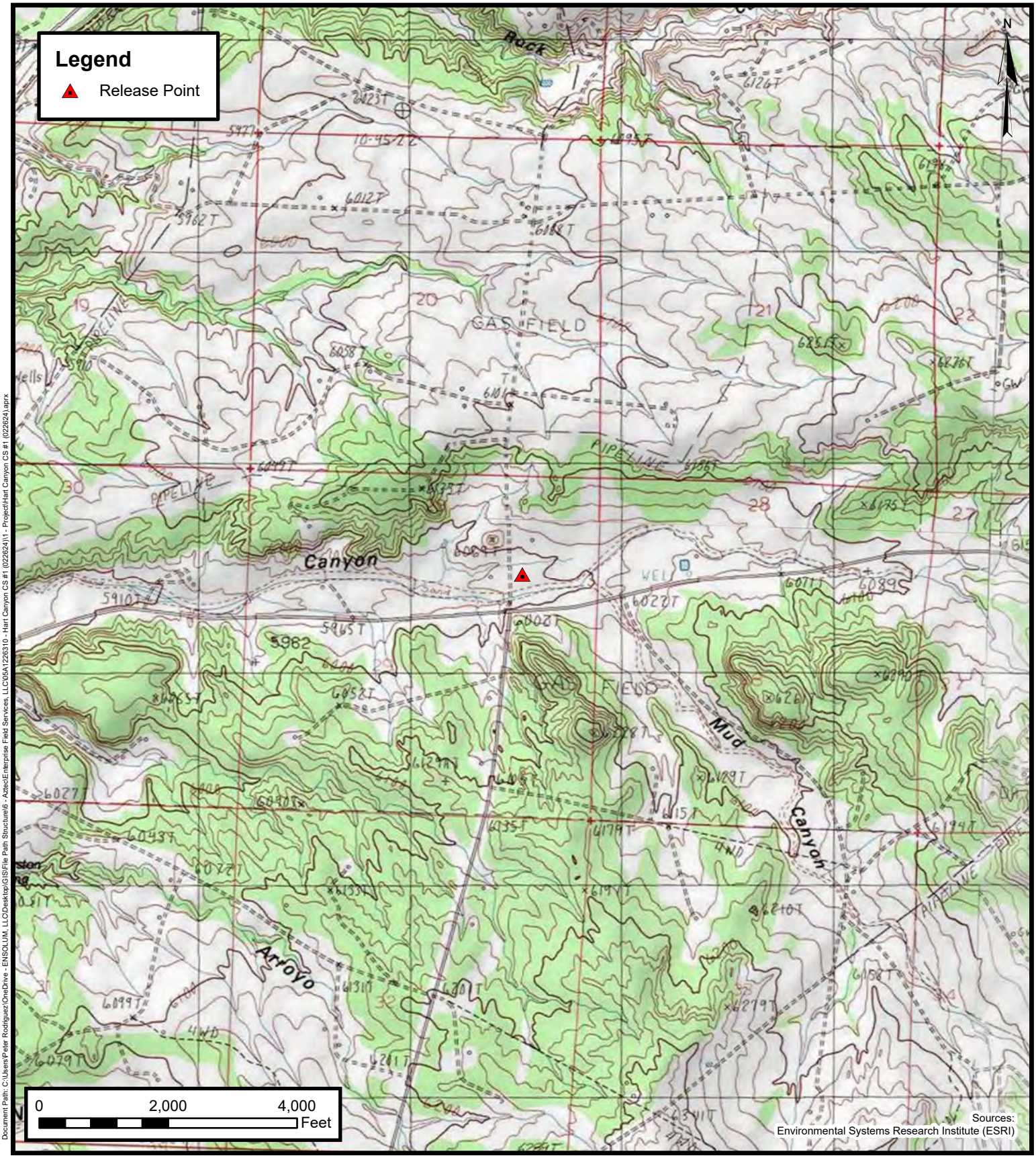
APPENDIX A

Figures



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Topographic Map

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE
1

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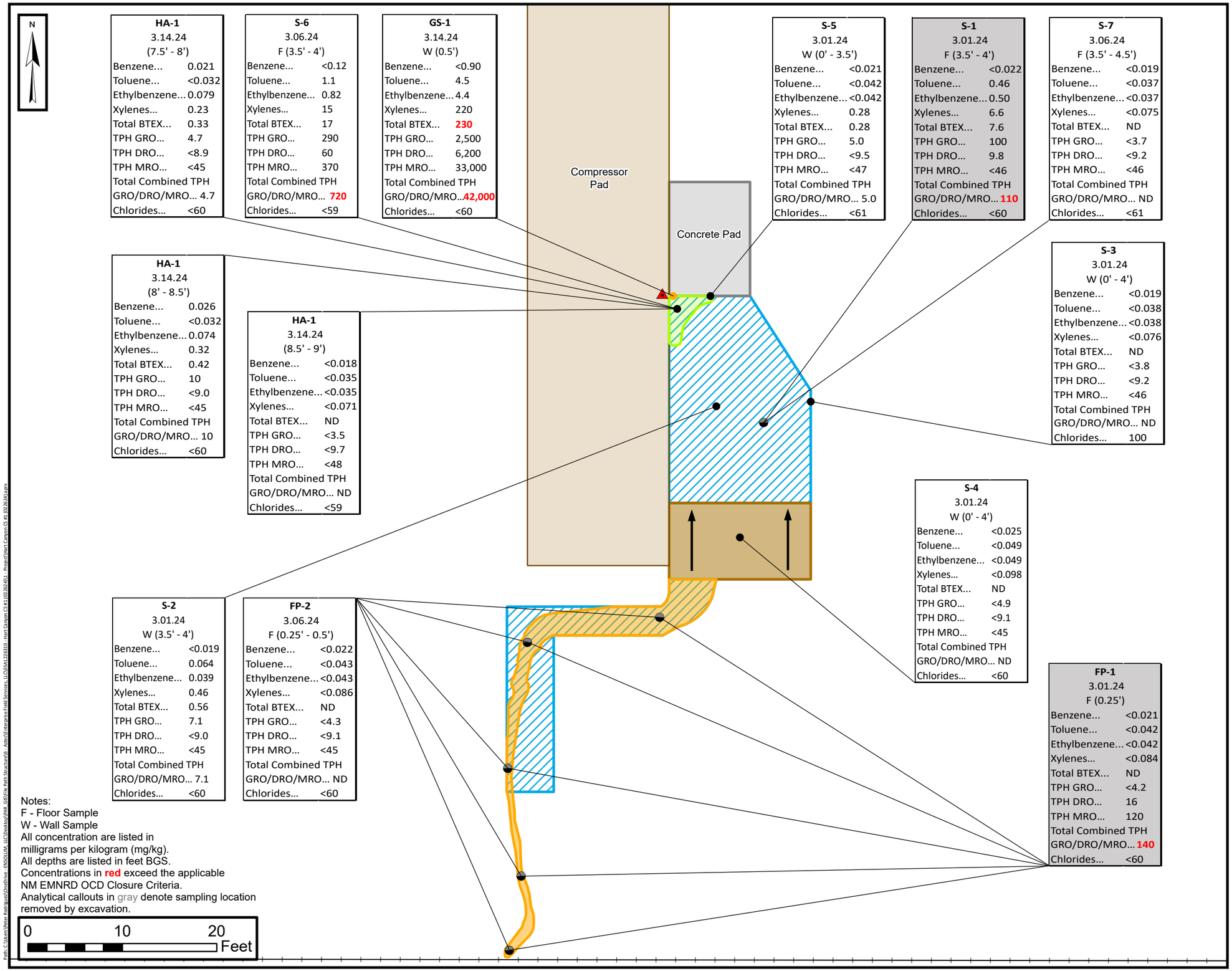
Site Vicinity Map

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE

2



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Site Map with Soil Analytical Results

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Unit Letter D, S29 T31N R10W
San Juan County, New Mexico
36.872656, -107.900192

Figure

3

Project Number: 05A1226310

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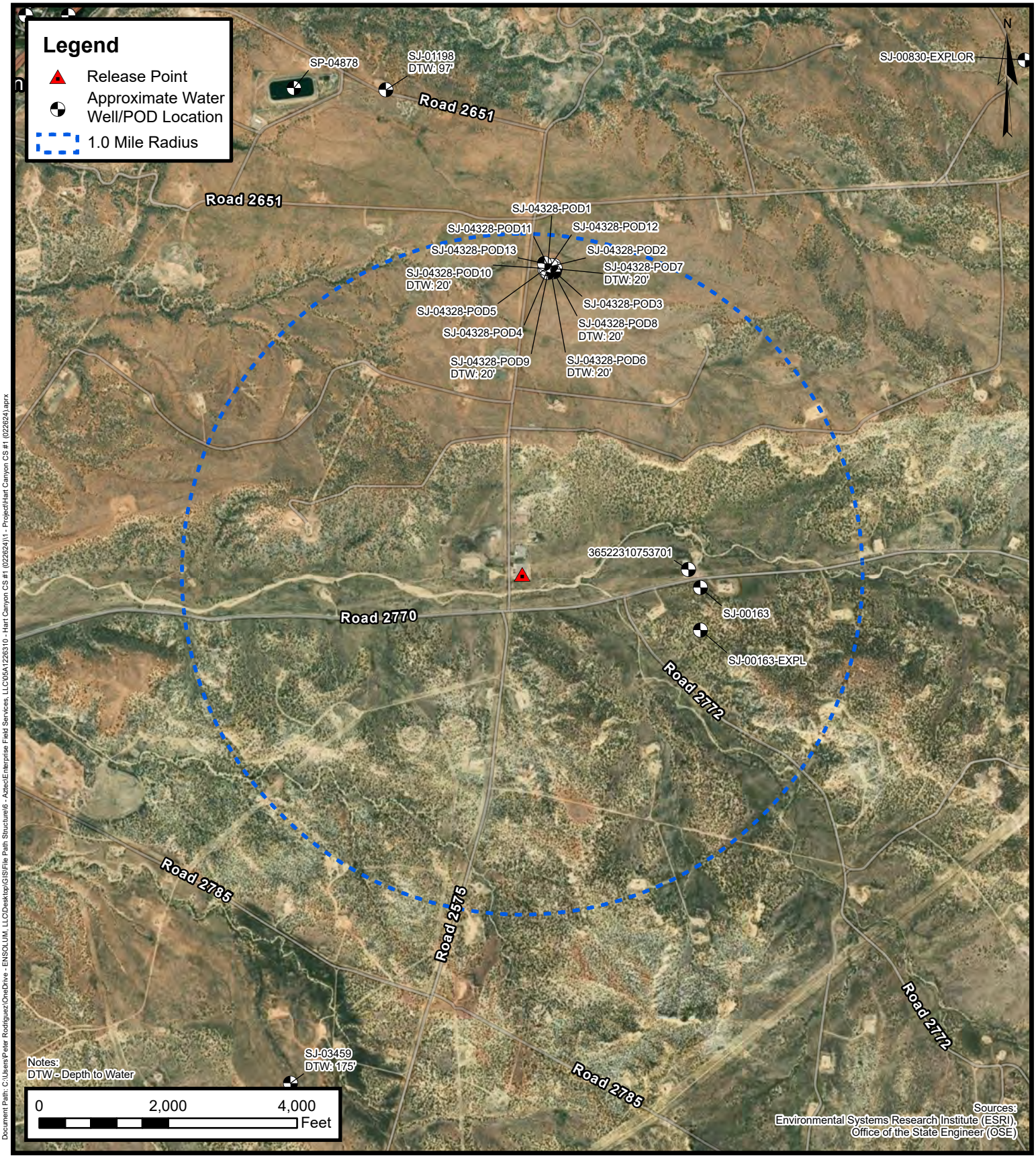
APPENDIX B

Siting Figures and Documentation



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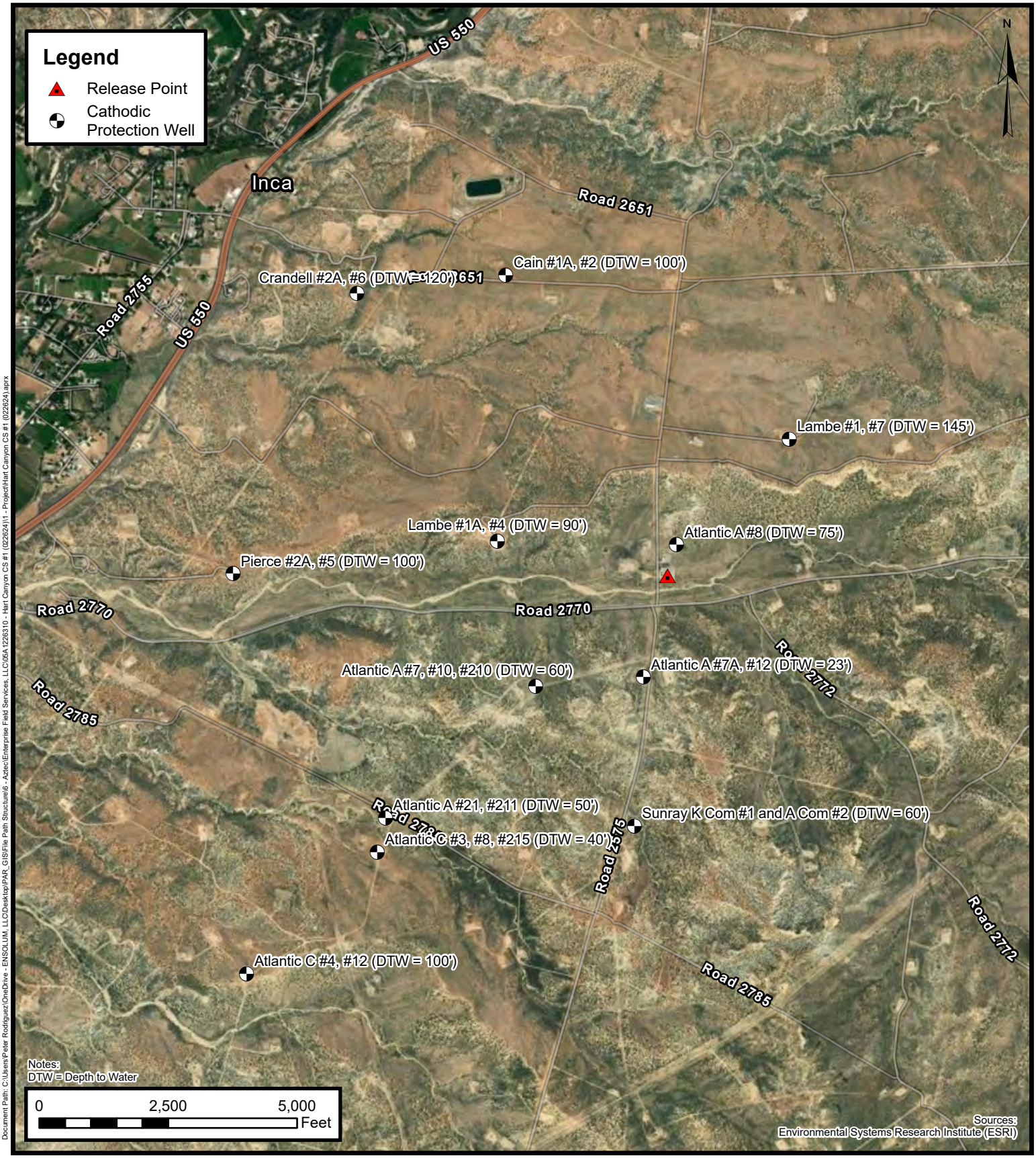
1.0 Mile Radius Water Well / POD Location Map

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE

A



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Cathodic Protection Well
Recorded Depth to Water
Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE
B

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300 Foot Radius Watercourse and Drainage Identification

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE

C

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300 Foot Radius Occupied Structure Identification

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE

D

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Water Well and Natural Spring Location

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE

E

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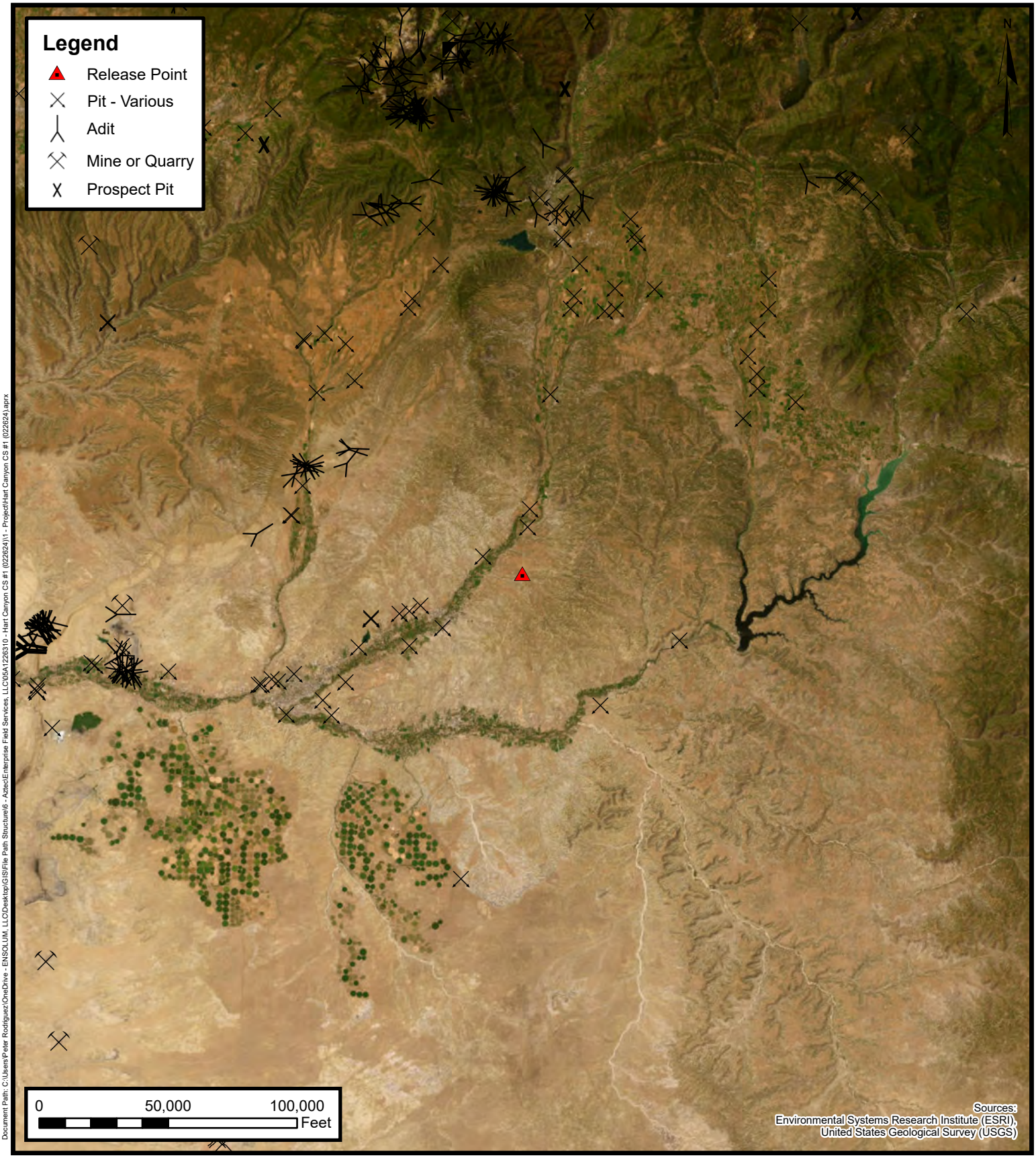
Wetlands

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE
F



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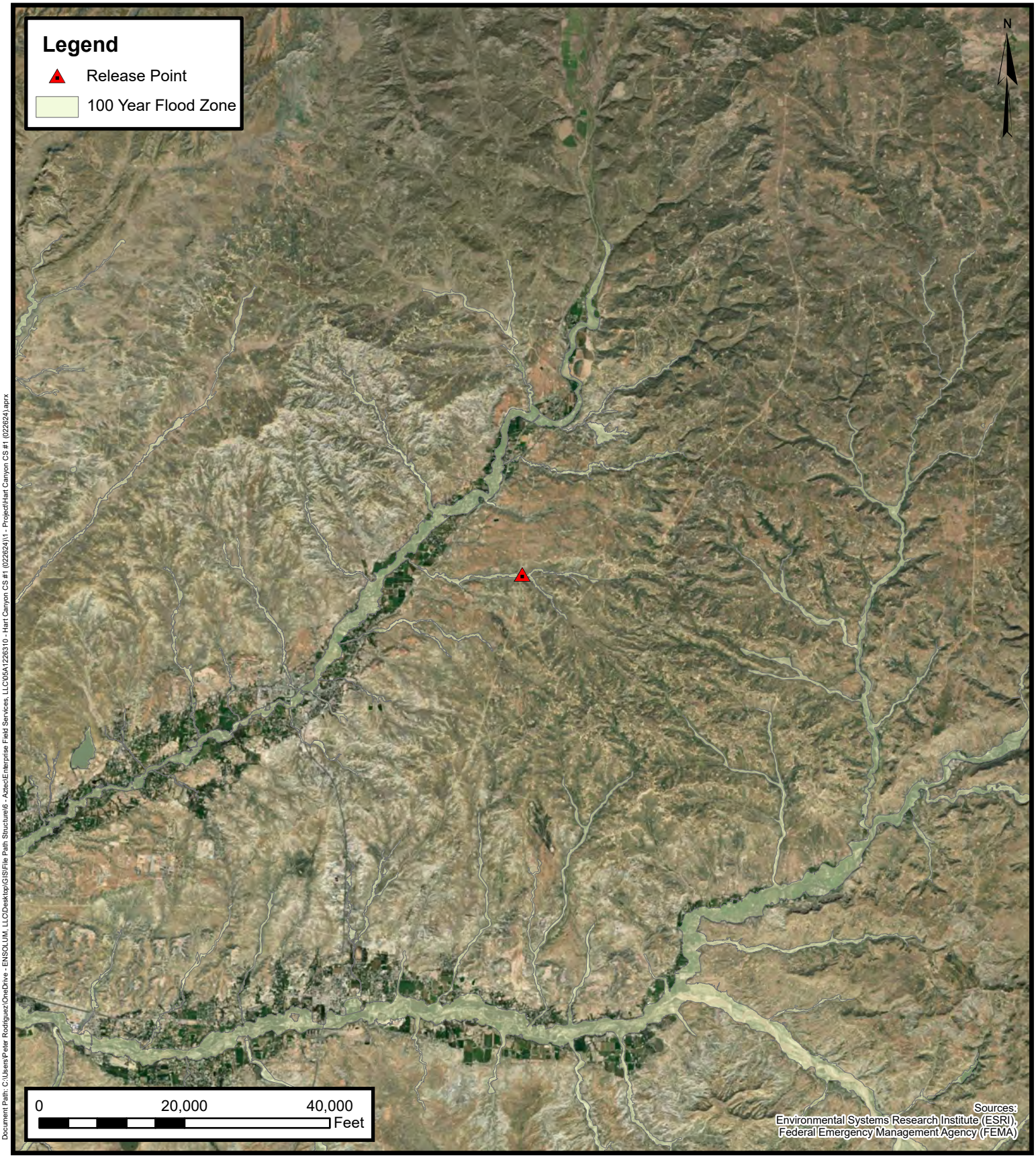
Mines, Mills, and Quarries

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE
G



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100-Year Flood Plain Map

Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Project Number: 05A1226310
Unit Letter D, S29 T31N R10W, San Juan County, New Mexico
36.872656, -107.900192

FIGURE
H

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00163		SJ	SJ	1	4	1	28	31N	10W	242330	4084609*	1538		
SJ 00163 EXPL		SJ	SJ	3	4	1	28	31N	10W	242330	4084409*	1538		
SJ 00555 CLW225581	O		SJ			1	19	31N	10W	239011	4086427*	70	45	25
SJ 01349		SJAR	SJ	3	3	1	19	31N	10W	238709	4086125*	78	67	11
SJ 01428		SJAR	SJ		3	1	19	31N	10W	238810	4086226*	65	45	20
SJ 02909		SJAR	SJ	1	1	1	19	31N	10W	238721	4086726*	60	47	13
SJ 02929		SJAR	SJ	1	1	1	19	31N	10W	238721	4086726*	58	40	18
SJ 02979		SJAR	SJ	1	1	1	19	31N	10W	238721	4086726*	57	43	14
SJ 03086		SJAR	SJ	3	1	1	19	31N	10W	238721	4086526*	61	44	17
SJ 03103		SJAR	SJ	1	1	1	19	31N	10W	238721	4086726*	53	33	20
SJ 03285		SJAR	SJ	1	1	3	19	31N	10W	238697	4085924*	40		
SJ 03359		SJAR	SJ	1	1	1	19	31N	10W	238721	4086726*	70		
SJ 03459		SJ	SJ	2	3	3	32	31N	10W	240390	4082266*	185	175	10
SJ 03486		SJAR	SJ	3	1	1	19	31N	10W	238721	4086526*	65	45	20
SJ 03487		SJAR	SJ	3	1	1	19	31N	10W	238721	4086526*	65	45	20
SJ 03705 POD1		SJAR	SJ	2	1	1	19	31N	10W	238921	4086726*	69	56	13
SJ 04328 POD10		SJ	SJ		4	2	20	31N	10W	241601	4086117	35	20	15
SJ 04328 POD6		SJ	SJ		4	2	20	31N	10W	241620	4086116	35	20	15
SJ 04328 POD7		SJ	SJ		4	2	20	31N	10W	241642	4086116	35	20	15
SJ 04328 POD8		SJ	SJ		4	2	20	31N	10W	241635	4086102	35	20	15
SJ 04328 POD9		SJ	SJ		4	2	29	31N	10W	241608	4086099	35	20	15
SJ 04495 POD1		SJAR	SJ	1	1	1	19	31N	10W	238659	4086784	40		

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

Average Depth to Water: **46 feet**

Minimum Depth: **20 feet**

Maximum Depth: **175 feet**

Record Count: 22

PLSS Search:

Section(s): 29, 19, 20, 21, 28, 30, 31, 32, 33 **Township:** 31N **Range:** 10W

#7 30-045-10272

#10 30-045-20761

#210 30-045-26993

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 SW Sec. 29 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC A #7, #10, #210

cps 2071w

Elevation 6034' Completion Date 11/13/73 Total Depth 260' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 4200 lbs.

Depths anodes placed: 240', 230', 220', 210', 200', 190', 180', 170', 160', 150'

Depths vent pipes placed: N/A

Vent pipe perforations: 206'

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.

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

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐ X 20 Completion Date 11-13-73

Well Name	Location	CPS No.
Atlantic "A" #7 & "A" #10	SW 29-31-10	330 W 7071
Type & Size Bit Used: 6 3/4		Work Order No.: 52479 & 54871

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
260		4200		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	240	230	220	210	200	190	180	170	160	150
Anode Output (Amps)	4.1	4.6	4.5	4.8	4.4	4.5	4.3	4.3	4.1	3.6
Anode Depth	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Output (Amps)										

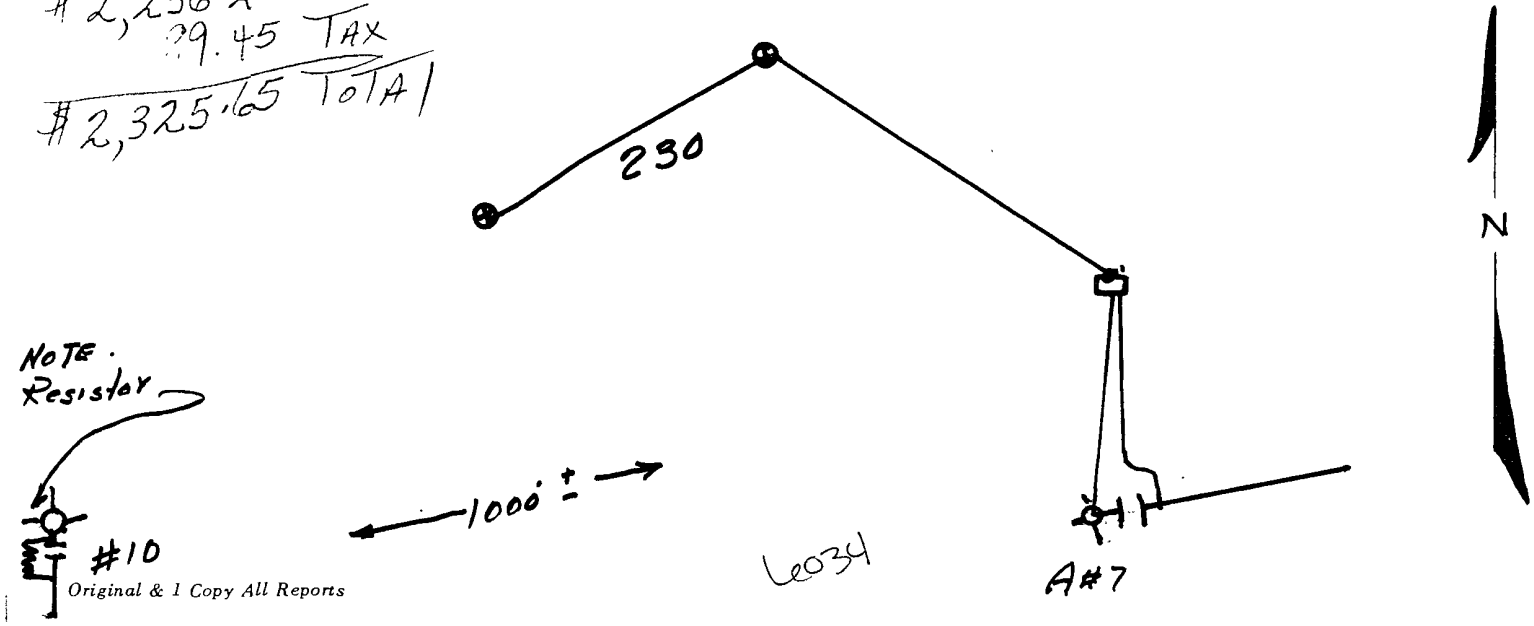
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.6	Amps 11.6	Ohms 1.0	235'	

Remarks: Driller Said Blew water out at 60; water standing at 175' Next A.M. - Log 175 to 257- Fill to 100 and Log 100' to 175' Vent Perforated 206'
Pump 42 Bags Coke

$2,230.00
319.20 Coke
47.00 Cable
$2,596.20
360.00 Depth Credit
$2,236.20
89.45 Tax
$2,325.65 Total

All Construction Completed
Darrels
(Signature)

GROUND BED LAYOUT SKETCH



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DRILLING DEPARTMENT

DAILY DRILLING REPORT

C.P.S. #330 – W

LEASE | WELL NO. | CONTRACTOR Mesa | RIG NO. | REPORT NO. | DATE 11 – 13 19 73

MORNING

Driller | Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	40	Dry Sand		
40	60	Wet Sand (Water)		
60	90	Sand		
90	260	Shale		

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

SERIAL NO. | STANDS

SIZE | SINGLES

TYPE | DOWN ON KELLY

MAKE | TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

DAYLIGHT

Driller | Total Men In Crew

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

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

SERIAL NO. | STANDS

SIZE | SINGLES

TYPE | DOWN ON KELLY

MAKE | TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

EVENING

Driller | Total Men In Crew

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

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

SERIAL NO. | STANDS

SIZE | SINGLES

TYPE | DOWN ON KELLY

MAKE | TOTAL DEPTH

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

FROM	TO	TIME BREAKDOWN

REMARKS –

SIGNED: Toolpusher Buck Mesa Company Supervisor

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Date:
By:

330 w - 11-13-73

40		20	29	Driller Said Dampa @ 40'
			30	Water at 160' - Start. inj.
50		30	30	Water Standing at
			28	175' - over night -
60		40	28	Log 175 to 251 - Fill
			27	with water to 100 & Log to 175
70		50	26	
			23	Vent. Perf. 206'
80		60	22	251 TD — Pump 42 Bags - Hole Full
90		70		
100	25			
	27			
10	27			
	27			
20	25			
	27			
30	30			
	28			
40	28			
	27			
50	25			
	26			
60	30			
	31			
70	30			
	29 — wtr. standing			
80	28			
	27			
90	28			
	30			
200	30			
	30			
10	31			
	29			

		Log	wtr	Coke
1	2 40	2.4	3.2	4.1
2	2 30	3.0	3.4	4.6
3	2 20	2.9	3.3	4.5
4	2 10	3.1	3.7	4.8
5	2 00	3.0	3.4	4.4
6	1 90	2.8	3.3	4.5
7	1 80	2.8	3.4	4.3
8	1 70	3.0	3.5	4.3
9	1 60	3.0	3.3	4.1
10	1 50	2.5	2.8	3.6

11.6 x 11.6 A = 1.0 ~

MW		gals/mol
16	C_1	6 4
30	C_2	9 56
44	C_3	10 42
58	IC_4	12 34
"	NC_4	11 93
72	IC_5	13 85
"	NC_5	13 71
86	IC_6	15 50
"	C_6	15 57
100	IC_7	17 2
"	C_7	17 46
114	C_8	19 38
28	$C_2^=$	9 64
42	$C_3^=$	9 67

MISC

MW		gals/mol
44	CO_2	6 38
34	H_2S	5 17
28	N_2	4 16
2	H_2	1 38

4937

30-045-10362

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. 29 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC A #8

cps 331w

Elevation 6010' Completion Date 5/12/72 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. 75'

RECEIVED
MAY 31 1991
OIL CON. DIV
DIST. 2

Depths gas encountered: N/A

Type & amount of coke breeze used: 5700 lbs.

Depths anodes placed: 230', 215', 200', 185', 175', 160', 145', 130', 115', 100'

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

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. 1-68)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

No 2 G.B.

Drilling Log (Attach Hereto) ☐

Completion Date 5-12-72

Well Name	Location	CPS No.
Atlantic #8A	NE 29-37-10	331 W

Type & Size Bit Used	Work Order No.
6 3/4	189-62611-50-20

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
280		5700		

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	230	215	200	185	175	160	145	130	115	100
Anode Output (Amps)	4.5	4.5	4.4	4.8	5.0	5.2	5.5	5.6	4.8	4.7
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

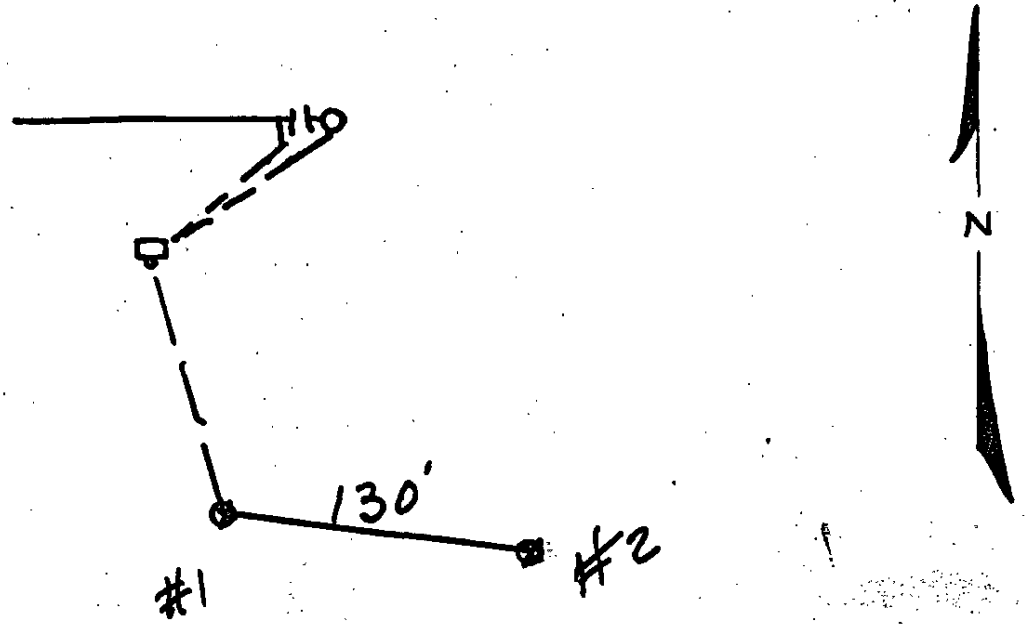
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.5	Amps 13.3	Ohms 0.86		

Remarks: Hole Drilled 5-11-72 - Water Level on 5-12-72 = 75'
Hose Perforated 200'
Pumped 338 Shovels, Slurry 60 ~~Bags~~ = Shovels
Est. 57 Bags Coke

All Construction Completed

ERP — OHS
(Signature)

GROUND BED LAYOUT SKETCH



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Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY
DRILLING DEPARTMENT

C.P.S. # 331w

DAILY DRILLING REPORT

LEASE atlantic WELL NO. # 8A CONTRACTOR morrow RIG NO. REPORT NO. DATE 5-12 1972

MORNING

Driller morrow Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	20	loose sand		
20	100	dry sand & shale		
100	120	water sand		
120	280	shale & sand streaks		

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

REMARKS –

DAYLIGHT

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

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

REMARKS –

SIGNED: Toolpusher Alex Morrow Company Supervisor

Form 7-1 (Rev. 5-67)

EL PASO NATURAL GAS COMPANY

ENGINEERING DEPARTMENT

Sheet ____ of ____

Date: ____

By: ____

2
120
338

331(w) Atlantic # 8A - 5-12-72

75	4.0	255
80	4.2	265
85	4.6	65
90	4.6	70
95	4.5	75
100	4.55	
	4.8	
10	5.0	
	5.0	
20	4.9	
	5.05	
30	4.85	
	4.85	
40	4.7	
	4.8	
50	4.85	
	4.8	
60	4.7	
	4.5	
70	5.0	
	4.9	
80	4.2	
	4.5	
90	4.3	
	4.65	
200	4.0	
	3.9	
10	3.9	
	4.0	
20	4.1	
	4.3	
30	3.7	
	3.15	
40	2.95	
	2.75	
50	Bottom	

Perf. Hose 200'

	Depth	Log	wtr.	coke
1	230	37	3.4	4.5
2	215	40	3.5	4.5
3	200	40	3.6	4.4
4	185	43	3.8	4.8
5	175	49	4.1	5.0
6	160	47	4.2	5.2
7	145	48	4.6	5.5
8	130	485	4.6	5.6
9	115	50	3.8	4.8
10	100	455	3.7	4.7

Pump 338 Slurry 60 shovels

11.5 V 13.3 A 0.86 Ω

Est 57 Bags

.86
13.3 | 11.50
1064
860
798

EL PASO NATURAL GAS COMPANY
DEEP GROUNDBED DATA
FARMINGTON, NEW MEXICO AREA
LOG FOR ATLANTIC #8-A

CPS-331-W

DEPTH FEET	LOGGING CURRENT (AMPS)	BEFORE COKE	AFTER COKE	ANODE NUMBER	DEPTH FEET	LOGGING CURRENT (AMPS)	BEFORE COKE	AFTER COKE	ANODE NUMBER
75'	4.0								
80'	4.2								
85'	4.6								
90'	4.6								
95'	4.5								
100'	4.55	3.7	4.7	#10					
105'	4.8								
110'	5.0								
115'	5.0	3.8	4.8	#9					
120'	4.9								
125'	5.05								
130'	4.85	4.6	5.6	#8					
135'	4.85								
140'	4.9								
145'	4.8	4.6	5.5	#7					
150'	4.85								
155'	4.8								
160'	4.7	4.2	5.2	#6					
165'	4.5								
170'	5.0								
175'	4.9	4.1	5.0	#5					
180'	4.2								
185'	4.3	3.8	4.8	#4					
190'	4.3								
195'	4.05								
200'	4.0	3.6	4.4	#3					
205'	3.9								
210'	3.9								
215'	4.0	3.5	4.5	#2					
220'	4.1								
225'	4.3								
230'	3.7	3.4	4.5	#1					
235'	3.15								
240'	2.95								
245'	2.75								
250'	2.7								

WELL: Atlantic #8-A
W.O. #184-62611.19-50-20
LOCATION: N.E. Sec. 29-31N-10W
DATE INSTALLED: 5-12-72
WATER LEVEL:
GROUNDBED: Volts: 11.5 - Amps 13.3
Total Resistance 0.864 Ohms

7A = 30-045-22730

12 = 30-045-20898

5022

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

Operator MERIDIAN OIL Location: Unit SE Sec. 29 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC A #7A, #12

cps 1321w

Elevation 6078' Completion Date 4/11/79 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. 23' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: 55 SACKS

Depths anodes placed: 285', 270', 255', 240', 225', 200', 185', 170', 155', 140'

Depths vent pipes placed: 290'

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. 1-69)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐ (1½" x 60" DURION) Completion Date 4/11/79

Well Name ATLANTIC A #7-A / ATLANTIC A #12			Location SE 29-31-10					CPS No. 1321-W	
Type & Size Bit Used 6 3/4"								Work Order No. 57258-21 / 55154-19	
Anode Hole Depth 320' T.D. 320		Total Drilling Rig Time		Total Lbs. Coke Used 55 SACKS		Lost Circulation Mat'l Used		No. Sacks Mud Used	
Anode Depth									
# 1 285'	# 2 270'	# 3 255'	# 4 240'	# 5 225'	# 6 200'	# 7 185'	# 8 170'	# 9 155'	# 10 140'
Anode Output (Amps)									
# 1 5.8	# 2 5.4	# 3 4.3	# 4 4.6	# 5 5.7	# 6 5.0	# 7 5.9	# 8 6.1	# 9 5.8	# 10 5.4
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 Volts 11.5V		Amps 23.0A		Ohms .5	No. 8 C.P. Cable Used			No. 2 C.P. Cable Used	

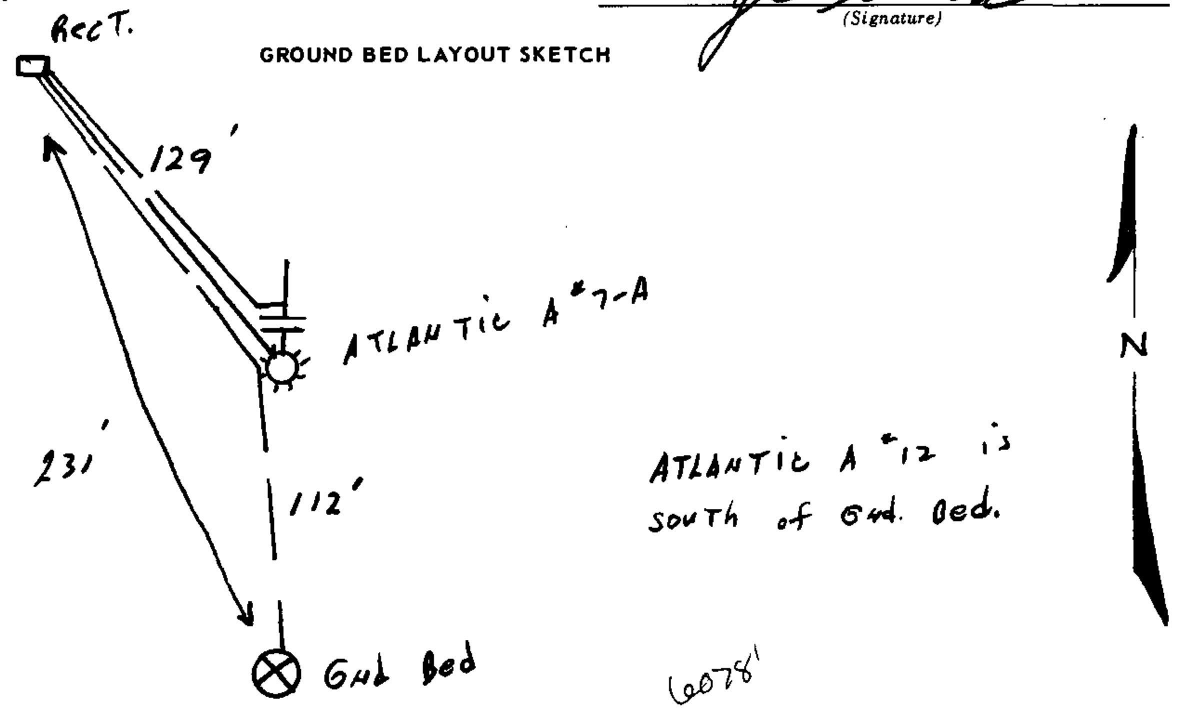
Remarks: ATLANTIC A-#7A STATIC 600~S. = .79v. ATLANTIC A #12 HAS BOND BOX. Driller said water at 23'. Approx. 3 gal/min. Took water sample. Drilled 320'. Installed 290' of 1" P.V.C. vent Pipe. Perforated 280'.

Ditch + 1 cable = 241'
extra cable = 283'
Hole Depth - 180'
Stub pole + 40v 16A
RecT.

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



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Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE CPS -1321 W WELL Atlantic A-7A CONTRACTOR Atlantic-A #12 RIG NO. W-1 REPORT NO. DATE April 11 1979

MORNING	DAYLIGHT	EVENING
Driller Joe Scarbrough Total Men In Crew	Driller Total Men In Crew	Driller Total Men In Crew

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

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

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

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

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

FROM	TO	TIME BREAKDOWN

FROM	TO	TIME BREAKDOWN

FROM	TO	TIME BREAKDOWN

REMARKS –

0 – 20 Sand Stone
20 – 27 Blue SHALE
27 – 250 Sandy SHALE
250 – 300 Blue SHALE
300 – 320 Sandy SHALE

REMARKS –

REMARKS –

Drilled 320
TD 320

Made Water 23'
APROX 3 gal per min

SIGNED: Toolpusher _____ Company Supervisor _____

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Sheet ~~Page 88 of 172~~
Date:
By:

ATLANTIC A # 7-A w.o. 57258-21
ATLANTIC A # 12 55154-19
CPS # 1321-W SE 29-31-10

30 — 2.1			Driller said water at 23'. Approx. 3 gal./min. Took water sample. Drilled to 320'. Installed 290' of 1" P.V.C. vent pipe. Perforated 280'.
1.6			
40 — 1.4			
1.3			
50 — .6	90 — 3.5		
.6	3.5		
60 — .6	200 — 3.4 — (6)		
.8	3.1		
70 — 1.3	10 — 2.6		
1.3	3.0		
80 — 1.7	20 — 3.1		
1.7	3.2 — (5)		
90 — 1.6	30 — 3.2		
1.7	3.2		
100 — 2.0	40 — 3.2 — (4)		
2.4	3.2		
10 — 2.8	50 — 3.1		
2.9	3.1 — (3)		
20 — 2.9	60 — 3.1		
2.9	3.1		
30 — 2.9	70 — 3.2 — (2)		
2.9	3.2		
40 — 3.1 — (10)	80 — 3.6		
3.2	3.6 — (1)		
50 — 3.5	90 — 3.6		
3.5 — (9)	3.6		
60 — 3.5	300 — 3.1		
3.5	3.1		
70 — 3.5 — (8)	10 — 3.0		
3.5			
80 — 3.5	20 — Drilled To + T.D.		
3.5 — (7)			

@23A = .5 V
11.5 V

1 = 285' — 4.4 — 5.8
2 = 270' — 4.3 — 5.4
3 = 255' — 3.5 — 4.3
4 = 240' — 3.9 — 4.6
5 = 225' — 4.2 — 5.7
6 = 200' — 3.9 — 5.0
7 = 185' — 4.3 — 5.9
8 = 170' — 4.4 — 6.1
9 = 155' — 4.4 — 5.8
10 = 140' — 4.0 — 5.4

4/11/79

W.O. 57258-21 — 8 hr. Reg. 1 Hr O.T.
55154-19 — 8 hr. Reg. 1 Hr O.T.

MW		gals/mol
16	C_1	0.8
30	C_2	0.96
44	C_3	10.42
58	IC_4	12.38
	NC_4	13.93
72	IC_5	13.85
?	NC_5	13.71
86	IC_6	17.50
—	C_6	15.47
100	IC_7	17.2
—	C_7	17.46
114	C_8	19.38
28	CO	0.64
42	$C_3^=$	9.67

MISC.

MW		gals/mol
44	CO_2	0.38
34	H_2S	5.17
28	N_2	0.74
2	H_2	0.38

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

Analysis No. 1-9523 Date 5-17-79

Operator EPNG Well Name ATLANTIC A 7A

Location SE29-31-10 County SAN JUAN State NM

Field _____ Formation _____

Sampled From CPS #1321W

Date Sampled _____ By _____

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

	ppm	epm		ppm	epm
Sodium	0	0	Chloride	16	1
Calcium	467	23	Bicarbonate	83	1
Magnesium	49	4	Sulfate	1225	25
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 23' 3 gal/min

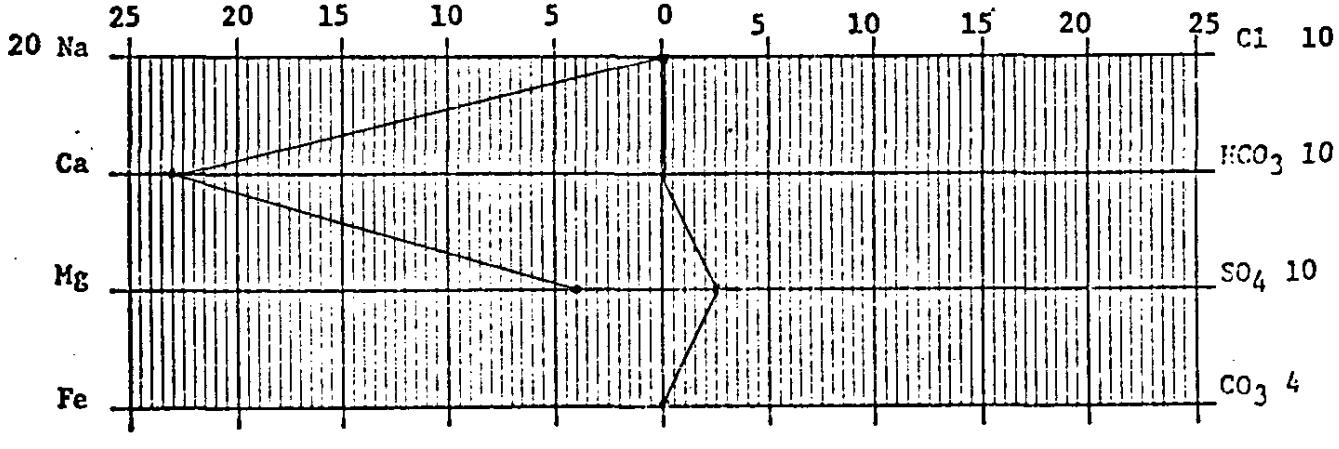
Total Solids Dissolved 2310

pH 7.3

Sp. Gr. 1.0039 at _____ 60°F

Resistivity 385 ohm-cm at 77 °F

Barnett + Tamillejo RZE
Chemist



Scale: epm

#21 30-045-23158

#211 - 30-045-27061 -

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 G Sec. 29 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC A #21, #211

cps 2073w

Elevation 5984' Completion Date 1/13/89 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' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 265', 255', 245', 235', 225', 215', 205', 195', 185', 176'

Depths vent pipes placed: 302'

Vent pipe perforations: 260'

Remarks: gb #1

RECEIVED
MAY 31 1991
CON. DIV.

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

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

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

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

comp 1-17-89

Drilling Log (Attach Hereto) ☒ Completion Date 1-13-89

CPS #	Well Name, Line or Plant:	Work Order #	Status:	Ins Union Check
2073-W	ATLANTIC "A" #211 / ATLANTIC "A" #213	3436A / 44812A		☒ Good ☒ Bad 2" BAD

Location:	Anode Size:	Anode Type:	Size Bit:
G29-31-10	2" x 60"	Duriron	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
300'	297'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	265'	255'	245'	235'	225'	215'	205'	195'	185'	176
Anode Output (Amps)	4.1	4.0	4.1	3.7	3.7	3.7	4.1	4.2	5.2	4.5
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 11.72	Amps 22.5	Ohms .521		

Remarks: DRILLED TO 300'; LOGGED 297'; DRILLER SAID WATER AT 50'; NO SAMPLE. INSTALLED 302' of 1" PVC VENT PIPE; PERFORATED BOTTOM 260'

(Wires) 555-9537-001-00-0

* CAN TIE IN TO EXISTING AC AND CROSS 2 of EPNG's MAIN LINES; CONTACT ME WHEN DITCHING

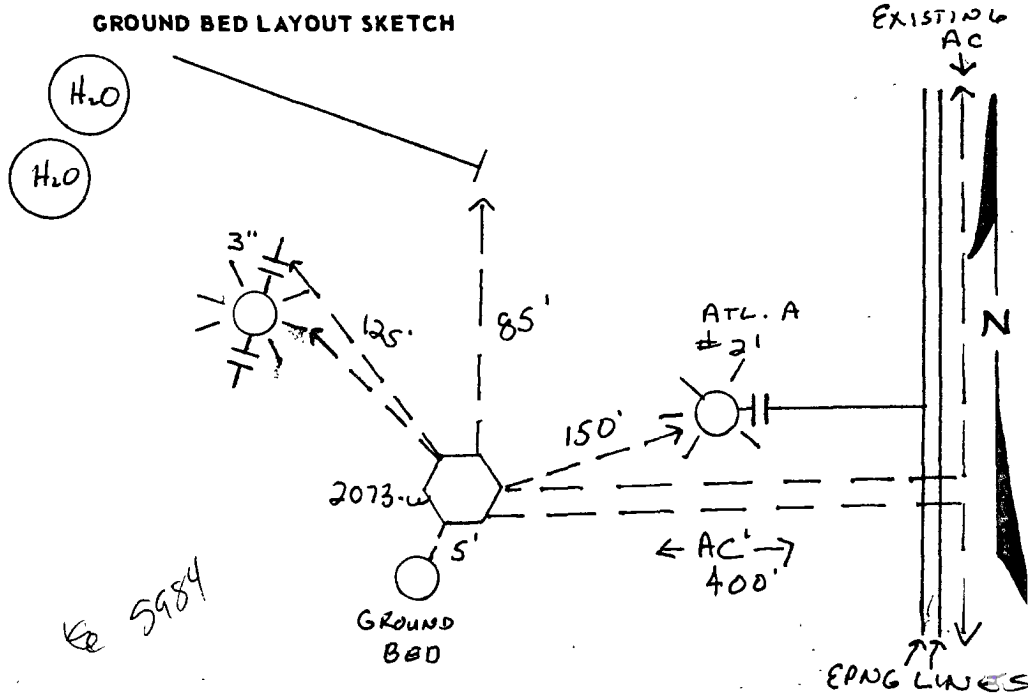
Rectifier Size: 40 V 16 A
Addn'l Depth
Depth Credit: 203' 3.50
Extra Cable: 595' .24
Ditch & 1 Cable: 765' .70
25' Meter Pole:
20' Meter Pole:
10' Stub Pole: 1
Junction Box: 1

4074.00
669.00 Rect
-710.50 Credit ✓
142.80 ex. cable ✓
535.50 Ditch + 1 ✓
158.50 Stub Pole
225.00 J. Box
5094.30 ✓
254.72 Tax
5349.02

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



KR 5984

Form 21 (Rev 5-77)

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: 1 of 1
Date: 12-14-7?
By: R.B.
File: 331W

CPS 331 W ATLANTIC A#8 (MU) 4.4 MIN. AMPS.
Close offset ATLANTIC A#21 (PC) (st P/S w = .90 1500 mA+)
(P/S with cps on = .92)

NE 29-31-10

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

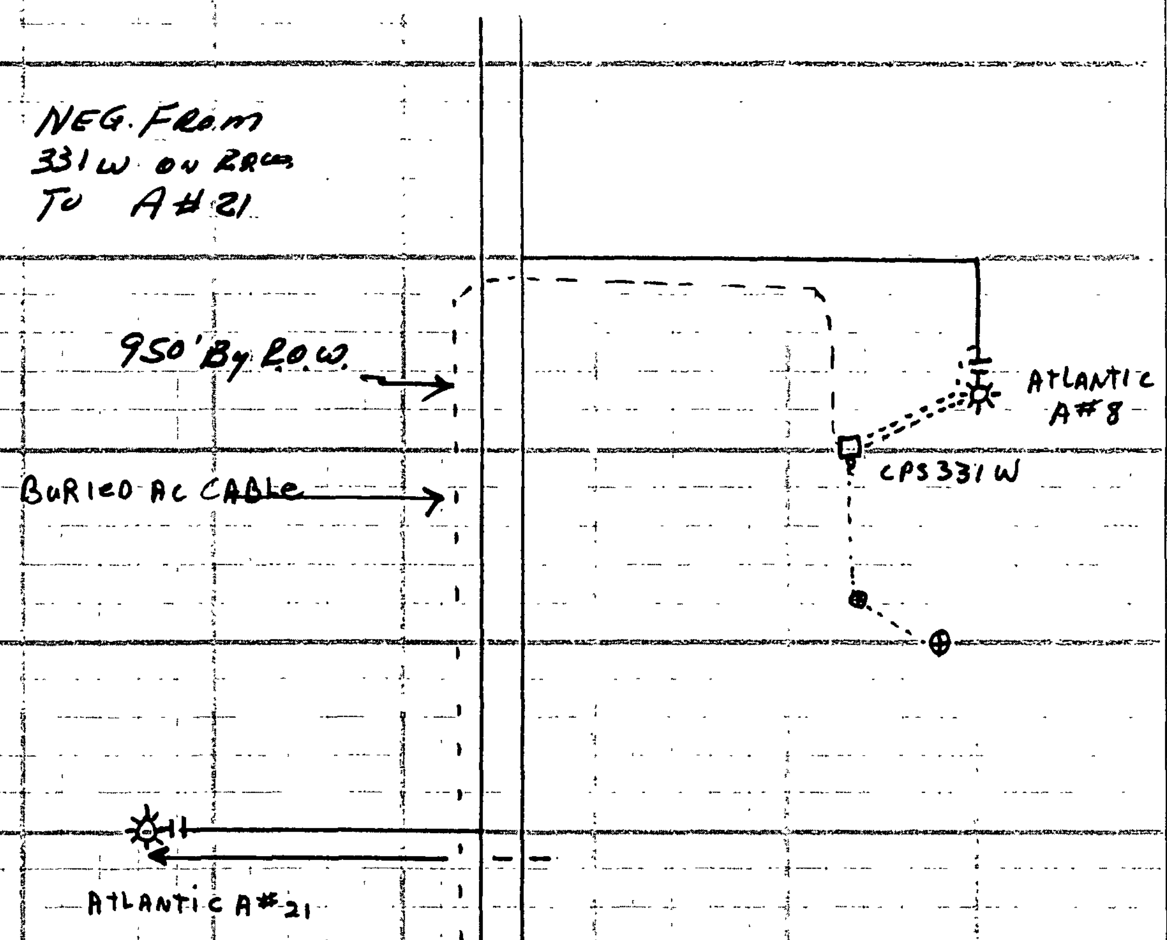
MISC.

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

950
800

CPS-331-W
File.

ORIGINAL Sketch Made 6-26-79



Cross DRILLING CO.

Drill No. D-10

DRILLER'S WELL LOG

S. P. No. Atlantic "9" #1 Date 1-13-82

Client Meridian Oil Prospect

County San Juan State N. 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	Sand, gravel
90	190	Shale
190	210	Sandstone, Sandy shale
210	270	Shale
270	300	Sandstone

Mud Bran Lime

Rock Bit Number 6 3/4" Make

Remarks: Water @ 50'

Driller Ron Mott

2A = 30-045-22109
6 = 30-045-20541 3647

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

Operator Meridian Oil Co. Location: Unit C Sec. 19 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced

Crandell #2A and #6

Elevation ____ Completion Date 4-4-93 Total Depth 375' Land Type P

Casing Strings, Sizes, Types & Depths 2/3 Set 98' of 8" PVC Casing. No Water, or Gas, But 38' of River Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented with 36 Sacks

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

N/A

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

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 375'

52 Sacks of Loresco

Depths anodes placed: 325, 300, 285, 275, 765, 255, 245, 235, 225, 195, 185, 175, 165, 155, 145

Depths vent pipes placed: 375'

Vent pipe perforations: Bottom 255'

Remarks:

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

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

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

API WATER ANALYSIS REPORT FORM

Laboratory No. 25-930417-1K

Company		Sample No.	Date Sampled
MERIDIAN OIL			4/4/93

Field	Legal Description	County or Parish	State
4139 W			

Lease or Unit	Well	Depth	Formation	Water, B/D
CRANDELL	#2A & #6			

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
	Commingled	K. Bishop

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

DISSOLVED SOLIDS

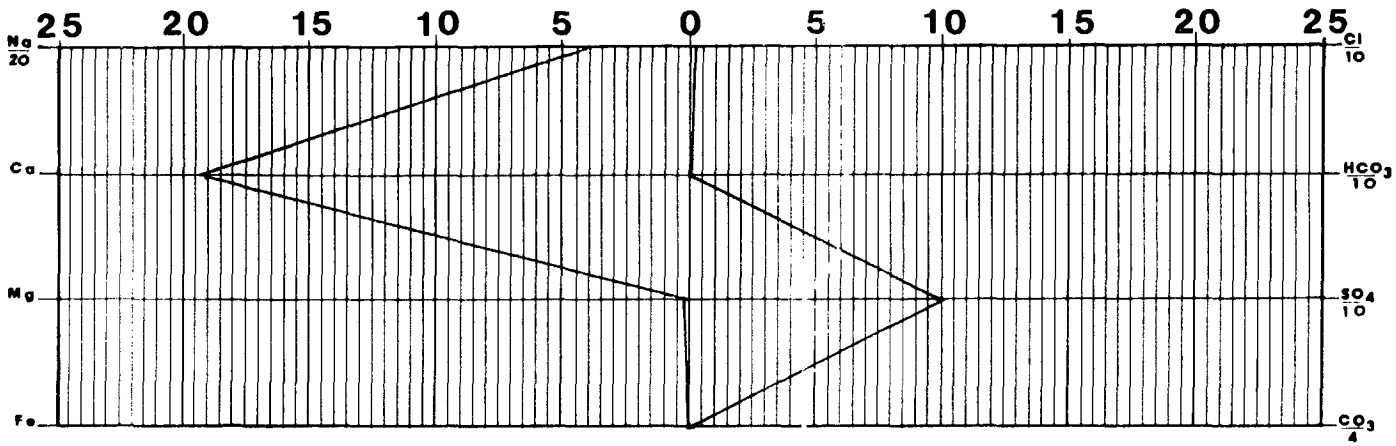
CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	1900	84
Calcium, Ca	387	19.3
Magnesium, Mg	2	0.2
Barium, Ba		

ANIONS		
Chloride, Cl	78	2.2
Sulfate, So_4	4900	100
Carbonate, CO_3	20	0.6
Bicarbonate, HCO_3	-	-

OTHER PROPERTIES

pH	9.6
Specific Gravity, 60/60 F.	1.0102
Resistivity (ohm-meters) 76 F.	1.25
Total Dissolved Solids (calc.)	7300
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS:



Date Received	Preserved	Date Analyzed	Analyzed By
April 7th, 1993		May 6th 1993	R.H.

CAIN 1-A 30-045-21748
CAIN 2 30-045-21830

5216

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

Operator KOCH EXPLORATION COMPANY Location: Unit D Sec. 20 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced CAIN-1A & 2

50/50 NM-02814

Elevation 6011 Completion Date 8-13-82 Total Depth 320' Land Type*F-NM-03187

Casing, Sizes, Types & Depths 7"STEEL @ 55'

If Casing is cemented, show amounts & types used NONE

NONE

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

NONE

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

Fresh, Clear, Salty, Sulphur, Etc. @-100'& 210'-CLEAR,ALKALI

Depths gas encountered: NONE

Type & amount of coke breeze used: METALLURGICAL,1400#

Depths anodes placed: 300'-290'-280'-270'-255'-245'-230'220'-200'-190'

Depths vent pipes placed: 310'

Vent pipe perforations: FROM 190'DOWN

Remarks:

RECEIVED
MAR 16 1990
OIL CON. DIV.
DIST. 3

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

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

CORROSION CONTROL CO.

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

Drilling Log (Attach Hereto). ☐ Completion Date August 13, 1982

Well Name	Location	
Cain #1-A+2	Koch	
Type & Size Bit Used: 6 1/4"		Work Order No.
Anode Hole Depth: 320'	Total Drilling Rig Time: 14 hrs	Total Lbs. Coke Used: 1400# / Lost Circulation Mat'l Used / No. Sacks Mud Used

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	300	290	280	270	255	245	230	220	200	190
Anode Output (Amps)	4.0	4.3	4.1	4.0	3.7	4.0	4.4	4.3	4.6	4.5

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

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.8	Amps 22.2	Ohms .53	2680'	

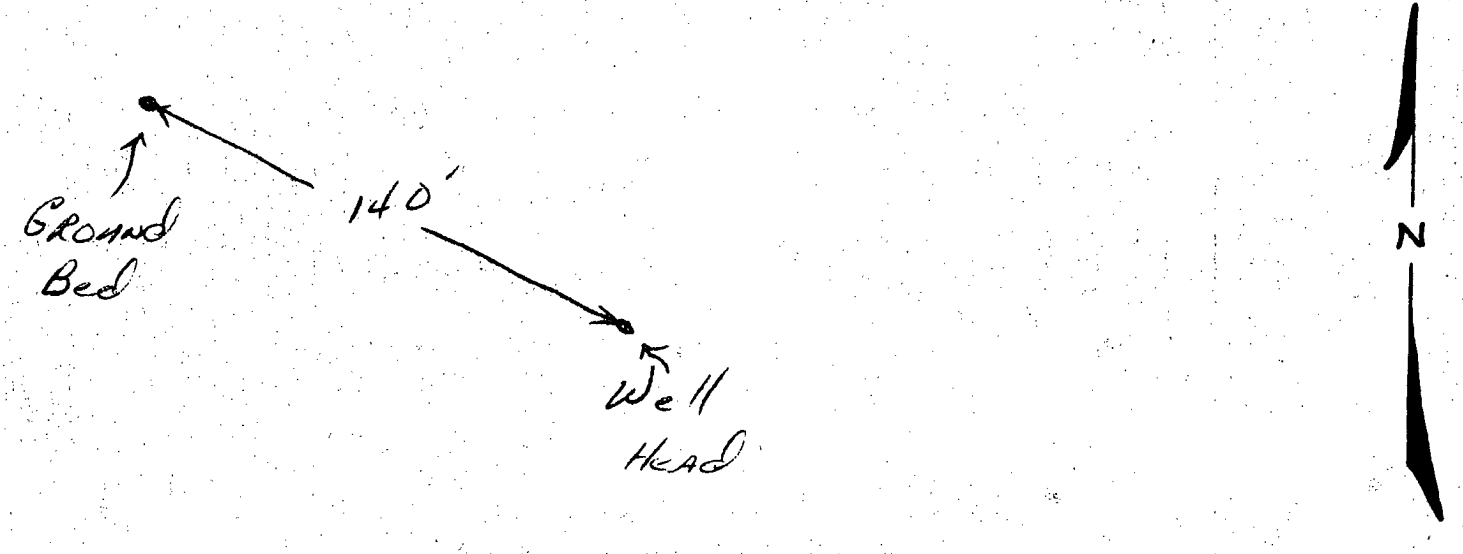
Remarks: Had to set 55' of 7" steel casing due to rocks. Water at 100' & 210'. Used 320' of 3/4" vent pipe.

Power From Lambe-245

All Construction Completed

Cody Mumbers
(Signature)

GROUND BED LAYOUT SKETCH



1 = 30-045-10462
7 = 30-045-21901

5230

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

Operator KOCH EXPLORATION COMPANY Location: Unit M Sec. 21 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced LAMBE-1 AND 7

Elevation 6125 **Completion Date** 8-30-1982 **Total Depth** 280' **Land Type*** F-NM-03187

Casing, Sizes, Types & Depths 7" STEEL @-44'

If Casing is cemented, show amounts & types used NONE

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

NONE

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

Fresh, Clear, Salty, Sulphur, Etc. @-145' SULPHUR & Alkali

Depths gas encountered: NONE

Type & amount of coke breeze used: METALLURGICAL--1000 #

Depths anodes placed: 260'-250'-240'-230'-220'-210'-200'-190'-180'-170'

Depths vent pipes placed: 270'

Vent pipe perforations: FROM 170' DOWN

Remarks:

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

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

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

CORROSION CONTROL CO.

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

Drilling Log (Attach Hereto). ☐ Completion Date August 30, 1982

Well Name	Location	
Lambe #1 & #7	Koch	
Type & Size Bit Used: 6 1/4"		Work Order No.:

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
280'	16 hrs	1000#		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	260	250	240	230	220	210	200	190	180	170
Anode Output (Amps)	3.4	4.0	4.7	4.5	4.8	6.0	5.6	4.3	3.4	3.9

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

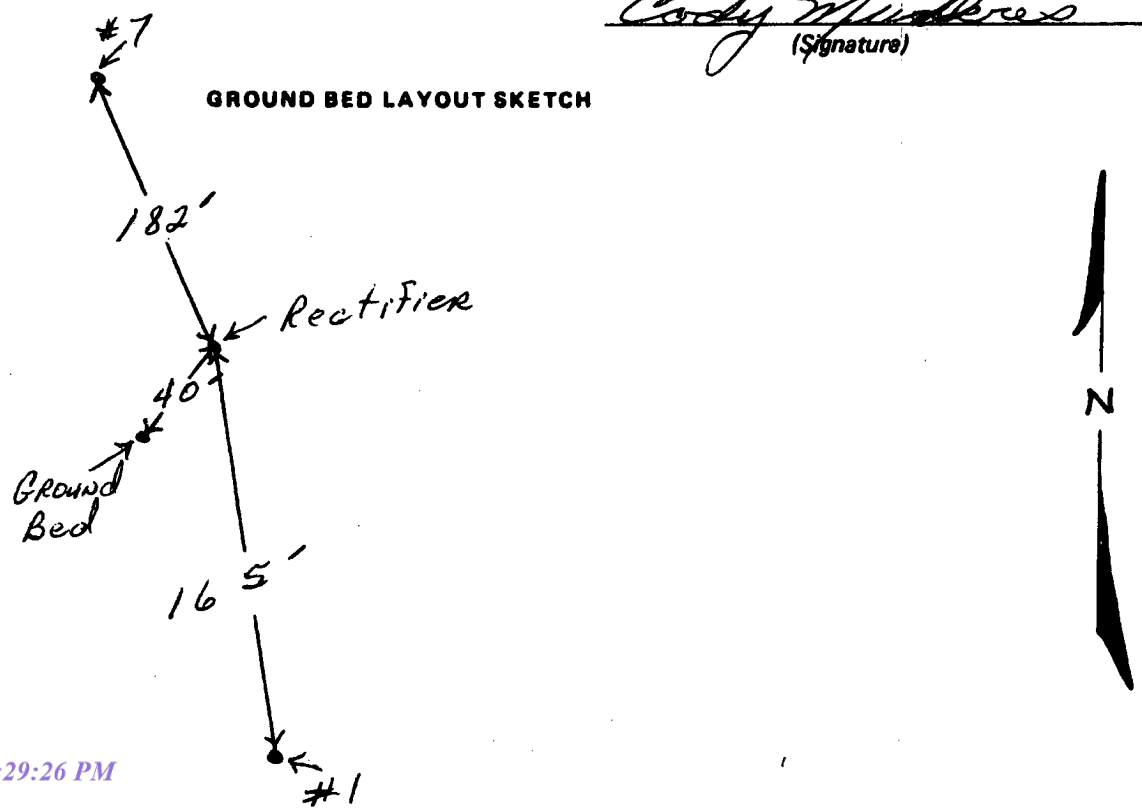
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.9	Amps 23.6	Ohms .50	2350'	

Remarks: Had to set 44' of 7" steel casing due to rocks & sand. Used 280' of 3/4" vent pipe. Water was at 145'.

All Construction Completed

Cody Mathews
(Signature)

GROUND BED LAYOUT SKETCH



5229

1A = 30-045-21692
4 = 30-045-21898

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

Operator KOCH EXPLORATION COMPANY Location: Unit D Sec. 21 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced LAMBE 1-A AND 4

Elevation 6151 **Completion Date** 8-6-82 **Total Depth** 320' **Land Type*** F-NM-03187

Casing, Sizes, Types & Depths 7"STEEL @-87'

If Casing is cemented, show amounts & types used NONE

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

NNE

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

Fresh, Clear, Salty, Sulphur, Etc. @-90' AND 180'-CLEAR SULPHUR & ALKALI

Depths gas encountered: NONE

Type & amount of coke breeze used: METALLURGICAL--1200#

Depths anodes placed: 300'-290'-280'-250'-235'-225'-215'-205'-195'-185'

Depths vent pipes placed: 300'

Vent pipe perforations: FROM 180' DOWN

Remarks:

RECEIVED
MAR 16 1990
OIL CON. DIV
DIST. 3

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

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

CORROSION CONTROL CO.

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

Drilling Log (Attach Hereto). ☐ Completion Date 8-[illegible]-82

Well Name	Location	
Lambe #1-A & 4	Koch	
Type & Size Bit Used: 6 1/4"		Work Order No.

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
320'	10 hrs	1200		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	300	290	280	250	235	225	215	205	195	185
Anode Output (Amps)	4.6	4.5	4.5	5.2	5.5	5.9	6.8	7.1	6.8	5.5

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

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.7	Amps 26.0	Ohms .45	2580'	

Remarks: Set 87 of 7" steel casing due to boulders & gravel. Water at 90' & 120'. Used 320' of Vent pipe.

All Construction Completed

Cody Mankin
(Signature)

GROUND BED LAYOUT SKETCH

4935
30-045-10242

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 10

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

cps 332w

Elevation 6071' Completion Date 9/13/74 Total Depth 409' 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: Fresh or Potable:

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

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

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 365', 355', 345', 335', 325', 315', 305', 295', 285', 275'

Depths vent pipes placed: N/A

Vent pipe perforations: 325'

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

Drilling Log (Attach Hereto). ☐

Completion Date 9-13-74

Well Name	Location	CPS No.
Atlantic A #3	SW 28-31-10	332 w

Type & Size Bit Used	Work Order No.
	52177

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
409				

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	365	355	345	335	325	315	305	295	285	275
Anode Output (Amps)	4.6	4.0	2.8	3.7	4.7	4.6	4.6	6.0	5.7	5.9

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

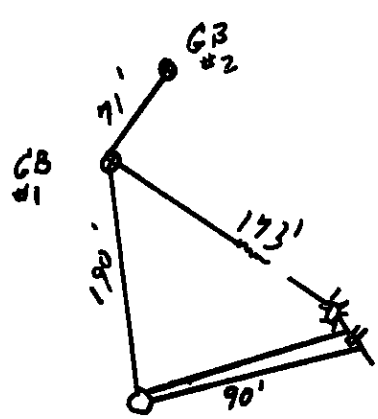
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.2	Amps 16.2	Ohms 0.69	71 Ft	

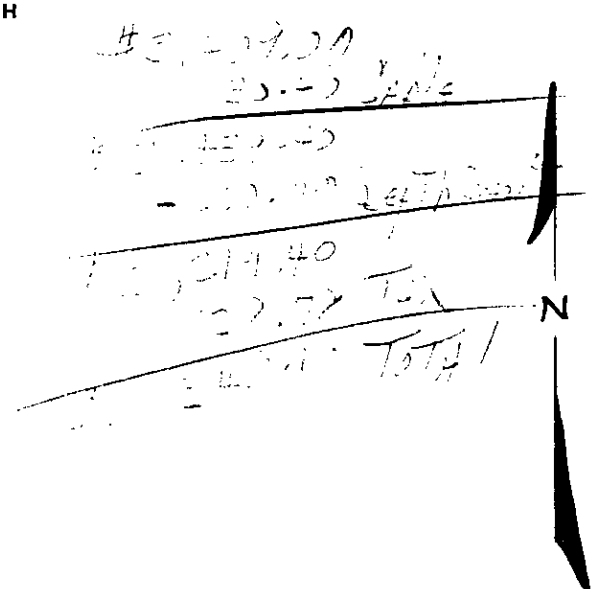
Remarks: Driller said water at 100'. After 1 Hour 120'
Vent Pipe Perforated 325'. Pumped coke to top of Hole

All Construction Completed

22 Lowe
(Signature)

GROUND BED LAYOUT SKETCH





EL PASO NATURAL GAS COMPANY

ENGINEERING DEPARTMENT

Sheet ___ of ___
Date: ___
By: ___

11.2 Volts
16.2 Amps
.69 ohms

vent Pipe perforated 325'
Driller said water @ 100'
409 Bottom

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

MISC.

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

100	.2	80	2.0
	.2		3.0
10	.2	90	2.9
	.3		3.0
20	.2	300	3.2
	.5		3.1
30	.4	10	3.0
	.5		3.3
40	.5	20	3.2
	.4		3.2
50	.6	30	3.0
	.2		2.8
60	.4	40	2.5
	.3		1.8
70	.2	50	2.3
	.2		2.8
80	.4	60	2.9
	.7		3.2
90	1.00	70	3.0
	.8		2.9
200	.9	80	3.1
	.7		2.9
10	.6	90	2.6
	.5		2.2
20	.4	400	2.2
	.4		
30	1.1	10	
	.9		
40	.9	20	
	1.0		
50	.8		
	.8		
60	.2		
	.2		
70	2.6		
	3.3		

①	365-	3.2	- 4.6
②	355-	2.8	- 4.0
③	345-	1.8	- 2.8
④	335-	2.8	- 3.7
⑤	325-	3.2	- 4.7
⑥	315-	3.3	- 4.6
⑦	305-	3.1	- 4.6
⑧	295-	3.0	- 6.0
⑨	285-	3.0	- 5.7
⑩	275-	3.0	- 5.9

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 1-838-4621

Drill GD 15 W Date 9-13-74

Owner C.P.S 332 W

Location
City FARMINGTON State N.M County

From	To	Formation	Color	Hardness
0	30	Surface	Br.	Soft
30	120	SANDSTONE	BL.	Hard
120	230	SANDSTONE WITL STREAKS Clay	BL	Hard
230	400	Shaled Clay	BL	Med
		Dry at 40		
		water at 100		

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

#2A → 30-045-22453
#5 → 30-045-20449

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

Operator Meridian Oil Co. Location: Unit E Sec. 30 Twp. 31 Rng 10

Name of Well/Wells or Pipeline Serviced

Pierce #2A And #5

Elevation ____ Completion Date 4/22/93 Total Depth 400 Land Type F

Casing Strings, Sizes, Types & Depths 4/17 Set 92' of 8" PVC Casing.
No Gas or Water, But 54'(35'-89') of Boulders were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented
With 38 Sacks. Added 10 sacks on 4/20/93

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. 100', clear

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 392', 35 bags
Loresco type SW coke & 38 bags Asbury, grade 4518.

Depths anodes placed: 370, 360, 335, 305, 295, 285, 270, 260, 250,
215, 205, 190, 180, 160, 150

Depths vent pipes placed: 392'

Vent pipe perforations: Bottom 292'

Remarks:

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

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

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

API WATER ANALYSIS REPORT FORM

Laboratory No. 25-930520-25

Company	Sample No.	Date Sampled
MERIDIAN OIL		4-22-93

Field	Legal Description	County or Parish	State
5087 W	E 30 31 10		

Lease or Unit	Well	Depth	Formation	Water, B/D
5818	Pierce 2A & 5			

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
		Dennis Torres

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

DISSOLVED SOLIDS

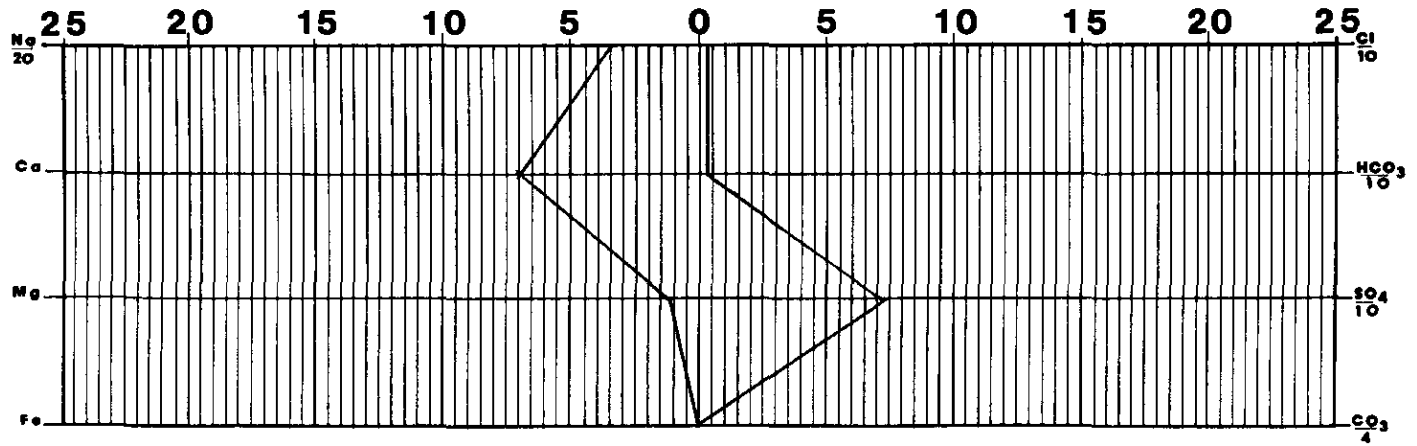
CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	1600	70
Calcium, Ca	140	7.0
Magnesium, Mg	15	1.2
Barium, Ba		

ANIONS		
Chloride, Cl	100	3.0
Sulfate, So_4	3500	73
Carbonate, CO_3	-	-
Bicarbonate, HCO_3	160	2.6

OTHER PROPERTIES

pH	8.03
Specific Gravity, 60/60 F.	1.0067
Resistivity (ohm-meters) 72 F.	1.5
Total Dissolved Solids (calc.)	5,500
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS:



Date Received	Preserved	Date Analyzed	Analyzed By
May 20th, 1993		June 4th, 1993	R.H.

#3 30-045-10152

#8 30-045-20137

#215 30-045-27112

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 G Sec. 31 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC C #3, #8, #215

cps 2069w

Elevation 6054' Completion Date 1/11/89 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. 40' & 120' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 315', 305', 295', 260', 250', 240', 195', 185', 175', 165'

Depths vent pipes placed: 350'

Vent pipe perforations: 320'

Remarks: gb #3

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MAY 31 1991
OIL CON. DIV.

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

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

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

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Comp 1-13-89

Drilling Log (Attach Hereto) ☒ Completion Date 1-11-89

#3 #8

CPS #	Well Name, Line or Plant	Work Order #	Static	Ins. Union Check
2069-W	ATLANTIC 'C' #215	3427A	600'S = .913	☒ Good ☐ Bad

Location	Anode Size	Anode Type	Size Bit
G31-31-10	2" x 60"	Duriron	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
360'	345'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	315'	305'	295'	260'	250'	240'	195'	185'	175'	165
Anode Output (Amps)	4.5	4.7	4.6	4.5	5.1	4.2	2.8	5.2	4.5	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 11.97	Amps 23.5	Ohms .509		

Remarks: DRILLED 360'; LOGGED 345'. DRILLER SAID WATER AT 40' & 120', NO SAMPLE. INSTALLED 350' of 1" PVC VENT PIPE, perforated BOTTOM 320'

* CAN TIE AC INTO EXISTING BURIED CABLE

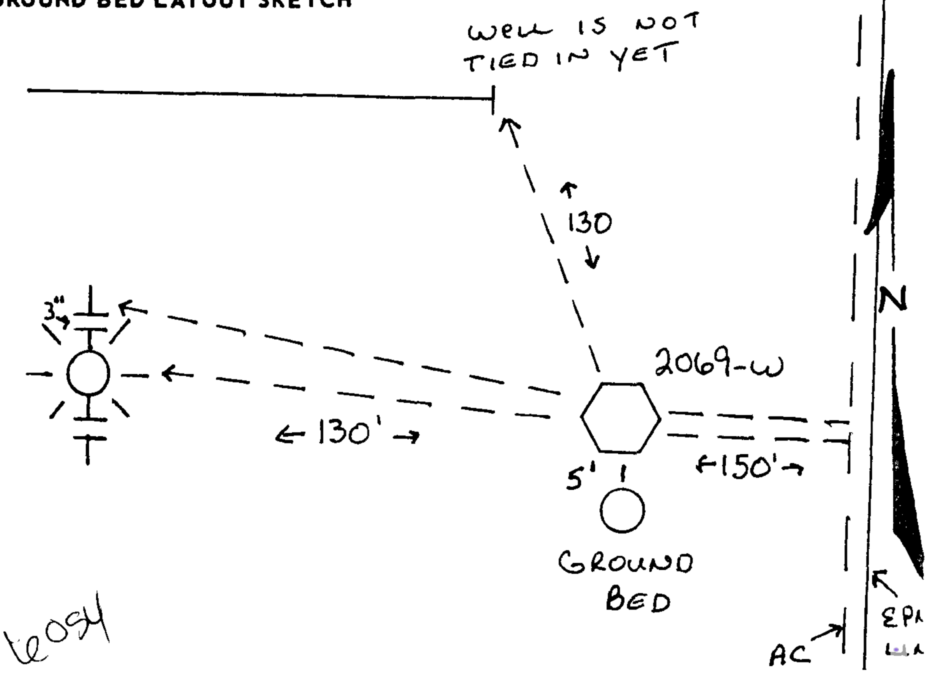
Rectifier Size: 40 V 16 A
Addn'l Depth
Depth Credit: 155' 350
Extra Cable: 340' 24
Ditch & 1 Cable: 415' 70
25' Meter Pole:
20' Meter Pole:
10' Stub Pole: 1
Junction Box: 1

All Construction Completed

(Signature)

4,074.00
-542.50 CREDIT ✓ (H₂O)
81.60 ex. CABLE ✓
290.50 Ditch & 1 ✓ (H₂O)
158.50 STUB Pole ✓
225.00 J. BOX ✓
669.00 RECT. ✓
4,956.10
247.81 TAX
5303.91

GROUND BED LAYOUT SKETCH



6054

_____ **DRILLING CO.**

Drill No. D-10

DRILLER'S WELL LOG

S. P. No. [illegible] Date 1-10-57

Client American Oil Prospect _____

County Sierra State N. Mex.

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

FROM	TO	FORMATION — COLOR — HARDNESS
0	30	Sand
30	170	Sand, Sandstone
170	210	Shale, Sandy shale
210	~~300~~ 250	Sandstone
250	290	Shale, Sandy shale
290	360	Sandstone
360	330	Shale
330	360	Sandstone

Mud _____ Bran _____ Lime _____

Rock Bit Number _____ Make _____

Remarks: Water @ 40'

Driller Ben Mott

4= 30-045-10046

12= 30-045-21141

4307

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. 31 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC C #4, #12

cps 378w

Elevation 6060' Completion Date 5/15/72 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. 100'

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MAY 31 1991
OIL CON. DIV
DIST. 3

Depths gas encountered: N/A

Type & amount of coke breeze used: 7700 lbs.

Depths anodes placed: 320', 310', 300', 290', 270', 260', 250', 240', 160', 135'

Depths vent pipes placed: N/A

Vent pipe perforations: 300'

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

GND BED NO. 2
By G.C.S.

Drilling Log (Attach Hereto). ☐

Completion Date 5-15-72

Well Name	Location	CPS No.
Atlantic #4C	SW 31-31-10	378W

Type & Size Bit Used	Work Order No.
6 3/4	184-52545-50-20

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
360		7700	None	None - (air Drilling)

Anode Depth	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
	320	310	300	290	270	260	250	240	160	135
Anode Output (Amps)	6.0	5.0	4.3	4.9	4.7	4.8	5.0	4.8	4.3	4.2
Anode Depth	# 11	# 12	# 13	# 14	# 15	# 16	# 17	# 18	# 19	# 20
Anode Output (Amps)										

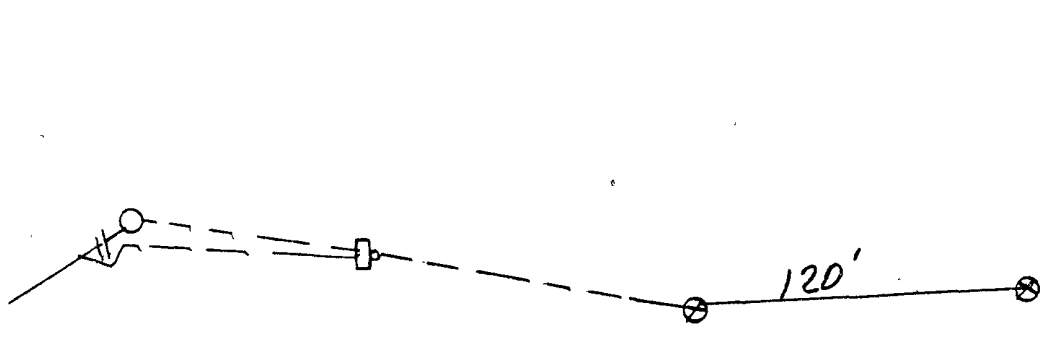
Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.0	Amps 14.3	Ohms 0.76 Ω		

Remarks: Driller said, Blew water out of Hole at 100'
Vent Hose Perforated 300'
Pump 360 shovels; Coke 25' of surface = Est. 72 Bags
Slurry Est. 5 Bags = 77 Bags Total

All Construction Completed

Darrels Paulek
(Signature)

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

EL PASO NATURAL GAS COMPANY
ENGINEERING DEPARTMENT

Date:
By:

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

MISC.

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

378 w -

Perf. Hose - 300'
Blew wtr out at 100'

80	4.2	60	4.6
	3.5		4.6
90	4.0	70	4.2
	3.4		3.9
100	2.9	80	3.0
	2.6		4.55
10	2.0	90	4.65
	2.75		4.0
20	4.2	300	4.75
	4.0		4.75
30	3.82	10	4.70
	4.0		5.5
40	2.82	20	5.6
	2.0		4.1
50	3.5	30	4.0
	3.75	32	Bottom
60	4.4	40	
	3.75		
70	3.7	50	
	3.1		
80	2.65	60	
	2.15		
90	1.85	70	
	1.85		
200	1.5	80	
	1.6		
10	2.0		
	2.45		
20	1.4		
	1.5		
30	3.2		
	4.75		
40	4.75		
	4.9		
50	4.8		
	4.6		

		Log	Wtr.	Coke
1	320	5.6	4.3	6.0
2	310	4.7	3.7	5.0
3	300	4.75	3.1	4.3
4	290	4.45	3.9	4.9
5	270	4.2	3.5	4.7
6	260	4.6	3.5	4.8
7	250	4.8	3.9	5.0
8	240	4.75	3.7	4.8
9	260	4.4	3.0	4.3
10	135	4.0	3.1	4.2

11.0 V 14.3 A

Pump 360 shovels - 25' of surface

Form 22-2 (Rev. 1-61)

C.P.S.# 3784

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE Atlantic WELL NO # 4-C CONTRACTOR Morrow RIG NO. REPORT NO. DATE 5-15 1972

MORNING

Driller Morrow Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	80	dry sand		
80	100	shaley sand		
100	140	shale		
140	160	sand		

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.
160	180	shale		
180	240	sand		
240	280	shale		
280	320	sand		

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.
320	360	shaley sand		

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 Manson Company Supervisor

1 = 30-045-10171

2 = 30-045-21170

3853

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

Operator Meridian Oil Co. Location: Unit B Sec. 32 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced

Sunray K Com #1 And Sunray A Com #2

Elevation ____ Completion Date 4-4-93 Total Depth 395' Land Type ____

Casing Strings, Sizes, Types & Depths Set 99' of 8" PVC Casing.

No Boulders or Gas During Casing

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

With 20 Sacks.

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

N/A

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. Fresh Water At 60' During Casing.

Depths gas encountered: None

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

Depths anodes placed: 380, 370, 363, 350, 340, 330, 320, 310, 300, 290, 235, 225, 215, 205, 195

Depths vent pipes placed: 395'

Vent pipe perforations: Bottom 270'

Remarks:

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

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

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

API WATER ANALYSIS REPORT FORM

Laboratory No. 25-930417-IN

Company		Sample No.	Date Sampled
MERIDIAN OIL			4/4/93
Field	**Legal Description**	**County or Parish**	**State**
335 W			
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	SUN RAY K COM #7			
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**
	Groundbed	K. Bishop

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

DISSOLVED SOLIDS

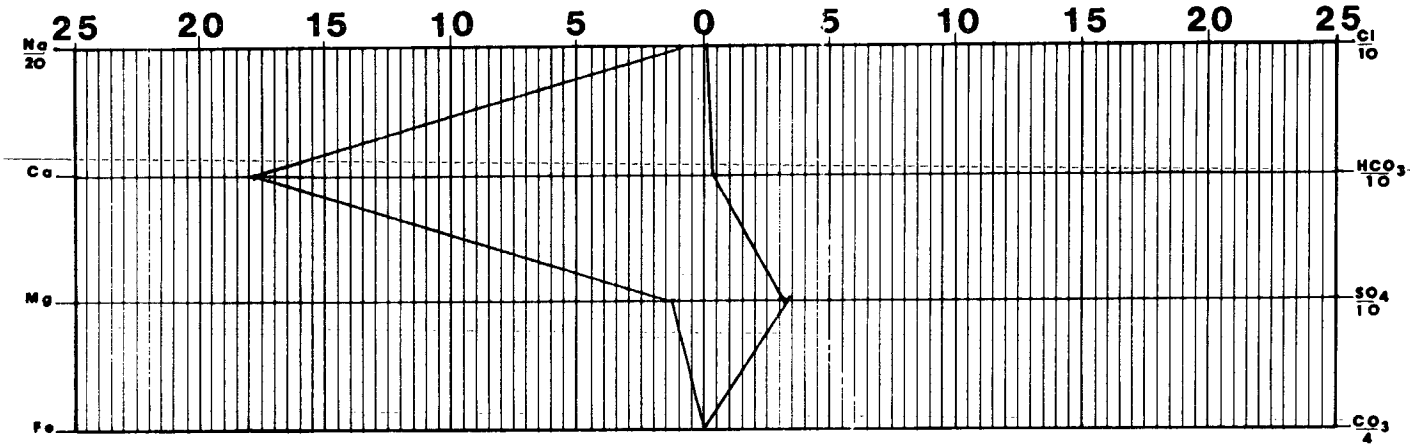
CATIONS	mg/l	me/l
Sodium, Na (calc.)	450	20
Calcium, Ca	357	17.8
Magnesium, Mg	15	1.2
Barium, Ba		

ANIONS		
Chloride, Cl	93	1.5
Sulfate, So_4	1600	33
Carbonate, CO_3	-	-
Bicarbonate, HCO_3	260	4.2

OTHER PROPERTIES

pH	7.15
Specific Gravity, 60/60 F.	1.0055
Resistivity (ohm-meters) 76 F.	3.6
Total Dissolved Solids (calc.)	2740
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS:



Date Received	Preserved	Date Analyzed	Analyzed By
April 7th, 1993		May 4th, 1993	R.H.

30-045-22976

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

Operator TENNECO Location: Unit NW Sec. 32 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced EPNG COM B #3A

cps 1451w

Elevation 6120' Completion Date 6/28/79 Total Depth 380' 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. DAMP AT 35', 75' WET AT 100' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: 40 SACKS

Depths anodes placed: 355', 345', 335', 325', 315', 305', 295', 270', 260', 250'

Depths vent pipes placed: 380'

Vent pipe perforations: 280'

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.

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

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐ CONTACT #2 2 x 60 ANODES Completion Date 6-28-79

Well Name	Location	CPS No.
EPNG Com B # 3A	NW 32-31-10	1451 W

Type & Size Bit Used	Work Order No.
6 3/4	57422-21

Anode Hole Depth	Total Drilling Rig Time	Total [illegible]. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
380' logged 380'		40 Sacks		

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	355	345	335	325	315	305	295	270	260	250
Anode Output (Amps)	3.1	3.2	3.4	3.1	4.1	4.0	3.0	4.2	4.9	4.6

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

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.7	Amps 15.1	Ohms .77		

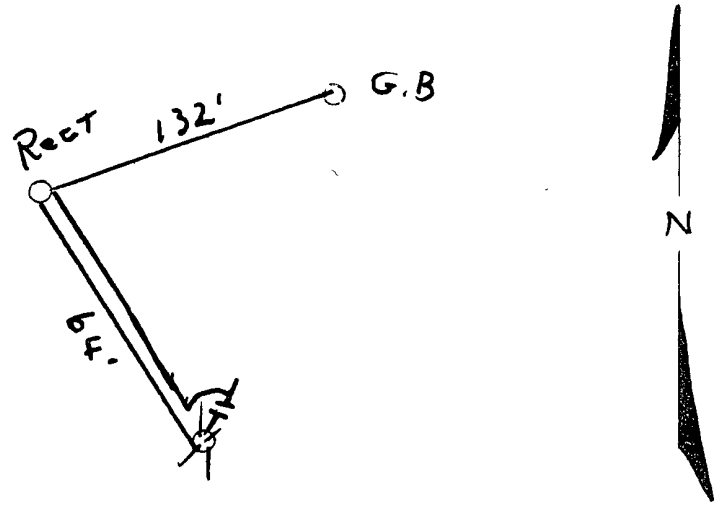
Remarks: DRILLER Said damp AT 35', 75', WET AT 100'. WAITED 20 MIN BLEW WATER. GOT WATER SAMPLE. INSTALLED 380' of 1" VENT PIPE. PERFORATED 280' of VENT PIPE SLURRYED 40 SACKS of COKE

1 440V 16A RECT
1 STUB POLE
DITCH - 1 CABLE 196'
EXTRA CABLE 84'
HOLE - 120'

All Construction Completed

Willis Knight Jr.
(Signature)

GROUND BED LAYOUT SKETCH



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PINK – Originator File

le 120

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ___ of ___
Date:
By: WK
File:

EPNG Com B # 3A
NW 32-31-10
W/O 57422-21
CPS 1451 W

CONTRACT # 2 2x60 ANODES

STATIC 600' E = .80

1 40V/6A Rect
1 STUD Pole
Ditch 1 Cable 196'
EXTRA Cable 84'
Hole - 120

DRILLED SAID damp AT 35-75 x 100'
WAITED 20 MIN AT 100', BLEW WATER
GOT WATER SAMPLE
INSTALLED 380' OF 1" VENT PIPE, PERFOR.
280' OF VENT. SLURRIED 40 SACK OF CO

75	.5				
90	.6				
	.7				
90	1.3				
	.8				
100	.5	50	2.4	(10)	6-27-79: 1 HR
	.4		2.3		6-28-79: 8 HR
10	.5	60	2.5	(9)	
	.4		2.5		
20	.4	70	2.5	(8)	
	.7		2.4		
30	.6		2.0		
	.5		1.9		
40	.5	80	2.3		
	.3		2.3	(7)	
50	.3	200	2.3		
	1.2		2.5	(6)	
60	1.9		2.7		
	1.6		2.7	(5)	
70	1.6		2.4		
	1.8		2.1	(4)	
	1.6		2.1		
	1.5		2.2	(3)	
	1.4		2.1		
	1.2		2.1	(2)	
	1.0		2.1		
	1.5		2.1	(1)	
	1.5		1.6		
	1.4		1.5		
	1.3				
	1.1		2.3		
	.8				
	.6				
	2.2				
	2.3				

345	2.5	3.1
345	2.5	3.2
335	2.7	3.4
325	2.6	3.1
315	3.1	4.1
305	3.0	4.0
295	2.4	3.0
270	2.8	4.2
260	3.3	4.9
250	3.1	4.6

11.7 V 15.1 = .77Ω

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

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

Analysis No. 1-9623 Date 7-11-79

Operator EPNG Well Name EPNG COM B # 3A

Location NW 32-31-10 County SAN JUAN State NM

Field _____ Formation _____

Sampled From CPS 1451W

Date Sampled _____ By _____

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

	ppm	epm		ppm	epm
Sodium	230	10	Chloride	80	2
Calcium	624	31	Bicarbonate	78	1
Magnesium	25	2	Sulfate	1900	40
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

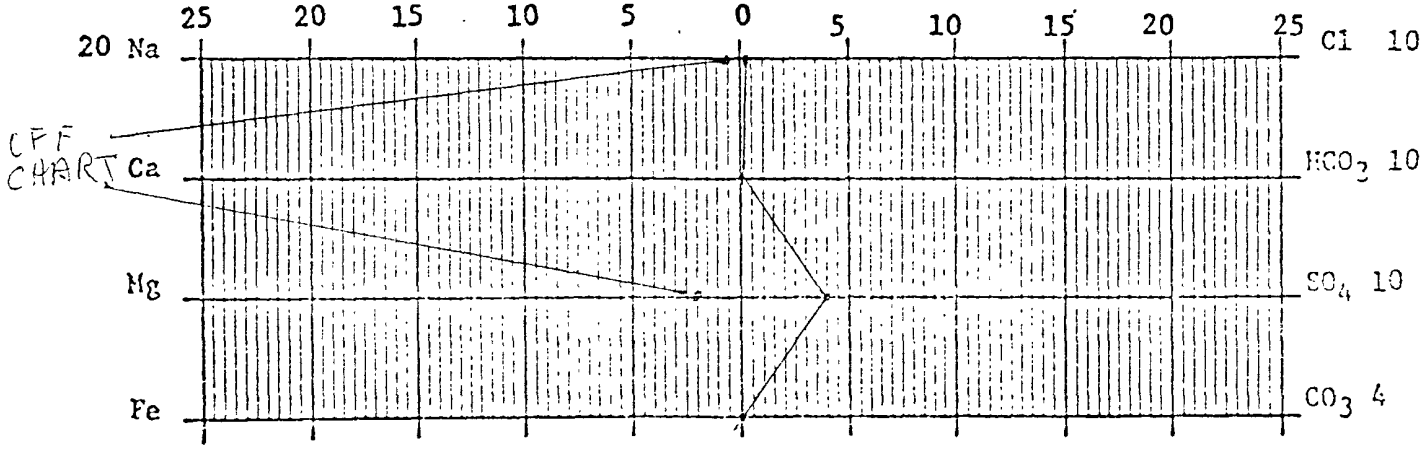
Total Solids Dissolved 3380

pH 7.6

Sp. Gr. 1.0037 at _____ 60°F

Resistivity 280 ohm-cm at 74 °F

Chemist



CFF CHART

Scale: epm

Form 22-2 (Rev. 1-61)

C.P.S. # 1451 W

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE | WELL NO. | CONTRACTOR Posey | RIG NO. | REPORT NO. | DATE 6-28 | 19 78

MORNING

Driller | Total Men In Crew

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

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
0	10	SURFACE SAND STONE
10	20	CLAY
20	30	SHALE
30	32	CLAY
32	33	SAND (wet)
33	34	SAND STONE

REMARKS –

310 - 330 SHALE
330 - 370 SANDY SHALE
370 - 380 SHALE

DAYLIGHT

Driller | Total Men In Crew

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

BIT NO. 6 3/4" | 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
34	75	SAND (wet)
75	77	SHALE
77	100	SAND (wet)
100	155	SANDY SHALE
155	210	SHALE
210	212	SANDY SHALE

REMARKS –

EVENING

Driller | Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
	T.D 380'			
	Logged 380'			

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
212	216	SHALE
216	238	SANDY SHALE
238	280	SHALE
280	290	SANDY SHALE
290	305	SHALE
305	310	SANDY SHALE

REMARKS –

WATER SAMPLE TAKEN @ 100'

SIGNED: Toolpusher Al Posey | Company Supervisor

161

30-045-22978

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. 36 Twp 31 Rng 10

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

cps 1450w

Elevation 6568' Completion Date 7/31/79 Total Depth 500' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 68 SACKS

Depths anodes placed: 485', 470', 460', 450', 260', 220', 210', 165', 155', 145'

Depths vent pipes placed: 500'

Vent pipe perforations: 440'

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 (2" x 60" Duron) Completion Date 7/31/79

Well Name	Location	CPS No.
ATLANTIC D COM #1A	NW 36-31-10	1450 W

Type & Size Bit Used	Work Order No.
6 3/4"	57329-21

Anode Hole Depth	Total Drilling Rig Time	Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
500' T.D. 500'		68 SACKS		

	#1	#2	#3	#4	#5	6	#7	8	9	#10
Anode Depth	485'	470'	460'	450'	260'	220'	210'	165'	155'	145'
Anode Output (Amps)	2.5	2.1	3.3	3.1	2.0	3.0	3.4	3.6	4.0	4.1
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 11.9 V	Amps 12.2 A	Ohms .9 Ω		

Remarks: STATIC 600' S = .90 V Driller said water at 100'. Approx. 1-2 gal./min. Drilled To 120', water standing in Hole next A.M. at 80'. Drilled To 340'. Logged Hole, Did not have enough shale. Drilled To 500'. Logged 500'. INSTALLED 500' of 1" P.V.C vent pipe, perforated 440'.

All Construction Completed

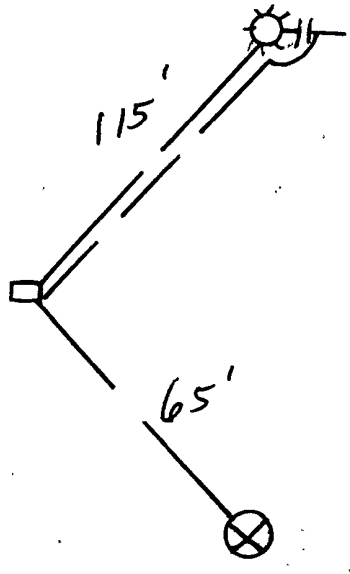
JC Slatte
(Signature)

DITCH + CABLE = 180'
EXTRA CABLE = 135'

[redacted]

STUB POLE & 40V 16A RECT

GROUND BED LAYOUT SKETCH



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Leased

Form 22-2 (Rev. 1-61)

8¾" 1450'

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE | WELL NO. | CONTRACTOR Rosey DAYLIGHT | RIG NO. | REPORT NO. | DATE 7-31 19 79

MORNING

Driller | Total Men In Crew

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

BIT NO. 6¾ | 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	1	Surface
1	40	Sand Stone
40	60	Shale
60	100	Sand wet Making water 1-2 gal Min
100	115	Shale
115	155	Sandy Shale
155	195	Shale
195	400	Sandy Shale
400	430	Shale
430	500	Sandy Shale

REMARKS –

DAYLIGHT

Driller | Total Men In Crew

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

Drilled 500

Logged 500

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

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

REMARKS –

SIGNED: Toolpusher Rosey Company Supervisor

Form 7-7 (Rev 9-77)

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

ATLANTIC D Com #1 A

CPS #1450W   NW 36-31-10   57329-21

100 — .6	310 — .6		
.2	.7		
10 — .	20 — .8		
	.9		
20 —	30 — .4		
	.5		
30 —	40 — .4		
	.3		
40 —	50 — .3		
1.8 — ⑩	.3		
50 — 1.9	60 — .29		
2.1 — ⑨	.3		
60 — 2.3	70 — .4		
1.8 — ⑧	.7		
70 — .8	80 — .8		
.8		4	
80 — .8	90 —	.4	
.9		.3	
90 — 1.1	400 —	.4	
.8		.9	
200 — .9	10 —	1.0	
1.1		1.1	
10 — 1.3 — ⑦	20 —	.9	
2.0		.9	
20 — 1.6 — ⑥	30 —	.6	
.8		.6	
30 — .4	40 —	.4	
.3		.8	
40 — .3	50 —	1.6 — ④	
.4		1.9	
50 — .5	60 —	1.6 — ③	
.6		1.0	
60 — 1.2 — ⑤	70 —	1.0 — ②	
1.0		.8	
70 — .6	80 —	.8	
.6		1.8 — ①	
80 — .5	90 —	2.2	
.4		2.1	
90 — .5	500 —	—	Drilled To TD.
.6			
300 — .5			
.5			

Driller said water at 100', Approx. 1-2 gal./min. Drilled to 120'. Water in hole next A.M. at 80'. Drilled to 340'. Logged hole, not enough shale. Drilled to 500'. Logged 500'. Installed 500' of 1" P.V.C. vent pipe perforated 440'.

11.9V 12.2A = .9 Ω
7/31/75 13 hrs

JL

1 —	485' —	2.0 —	2.5
2 —	470' —	1.3 —	2.1
3 —	460' —	2.0 —	3.3
4 —	450' —	1.7 —	3.1
5 —	260' —	1.3 —	2.0
6 —	220' —	2.0 —	3.0
7 —	210' —	1.3 —	3.4
8 —	165' —	2.4 —	3.6
9 —	155' —	2.2 —	4.0
10 —	145' —	2.2 —	4.1

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

Analysis No. 1-9675 Date 8-14-79

Operator EPNG Well Name ATLANTIC D COM #1A

Location NW36-31-10 County _____ State _____

Field _____ Formation _____

Sampled From CPS 1450'W Water at 100'

Date Sampled _____ By _____

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

	ppm	epm		ppm	epm
Sodium	1610	70	Chloride	312	9
Calcium	528	26	Bicarbonate	176	3
Magnesium	51	4	Sulfate	4250	88
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

APPROX 1/2 GAL/MIN

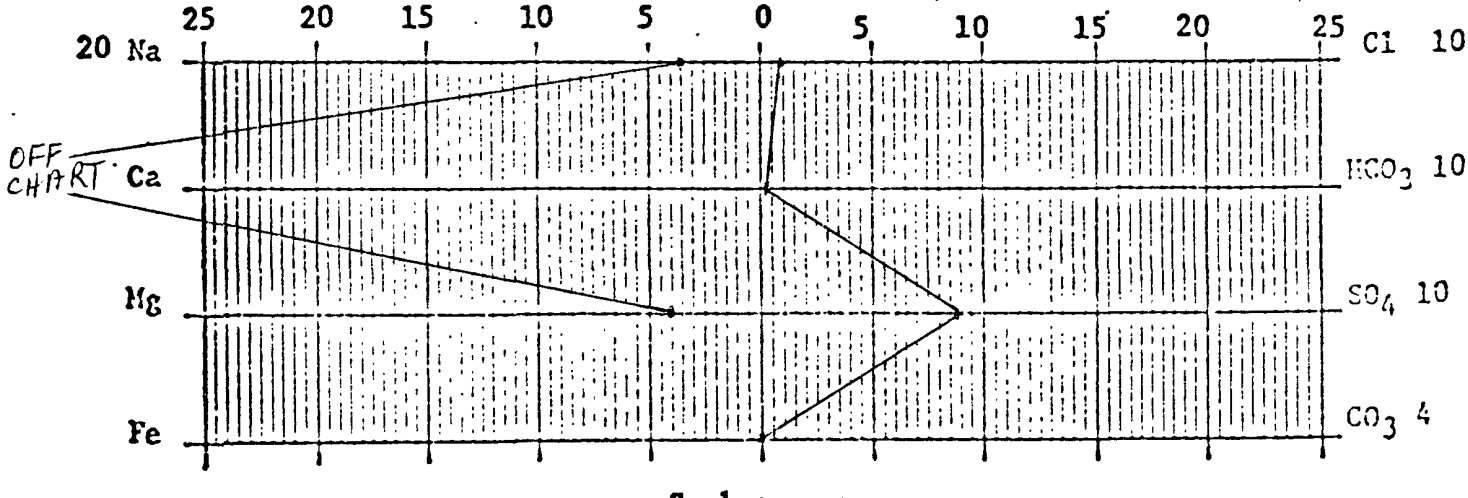
Total Solids Dissolved 7450

pH 7.7

Sp. Gr. 1.0081 at _____ 60°F

Resistivity 110 ohm-cm at 75 °F

Cheryl Tenwilliger
Chemist



Scale: epm

965

B

30-045-22944

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

Operator TENNECO Location: Unit NW Sec. 33 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC B #6A

cps 1446w

Elevation 6167' Completion Date 7/12/79 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. 100' SAMPLE TAKEN

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 39 SACKS

Depths anodes placed: 270', 260', 245', 230', 220', 210', 200', 190', 145', 135'

Depths vent pipes placed: 300'

Vent pipe perforations: 200'

Remarks: gb #1 NOT A MERIDIAN WELL. FIRST HOLE(300') CAVED. LOST 2 ANODES AND 300' OF VENT PIPE.

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). ☐ CONTRACT #2 2"X60" DURION. Completion Date 7/12/79

Well Name	Location	CPS No.
ATLANTIC B #6A	NW 33-31-10	1446 W

Type & Size Bit Used	Work Order No.
6 3/4"	57325-21

Anode Hole Depth	Total Drilling Rig Time	Total lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
300' T.D. 300'		39 SACKS		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	270'	260'	245'	230'	220'	210'	200'	190'	145'	135'
Anode Output (Amps)	2.3	2.9	1.4	1.9	2.5	4.0	4.2	3.2	3.5	3.9
Anode Depth	120'	[redacted]								
Anode Output (Amps)	2.6									

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.8 V	Amps 13.7 A	Ohms .86		

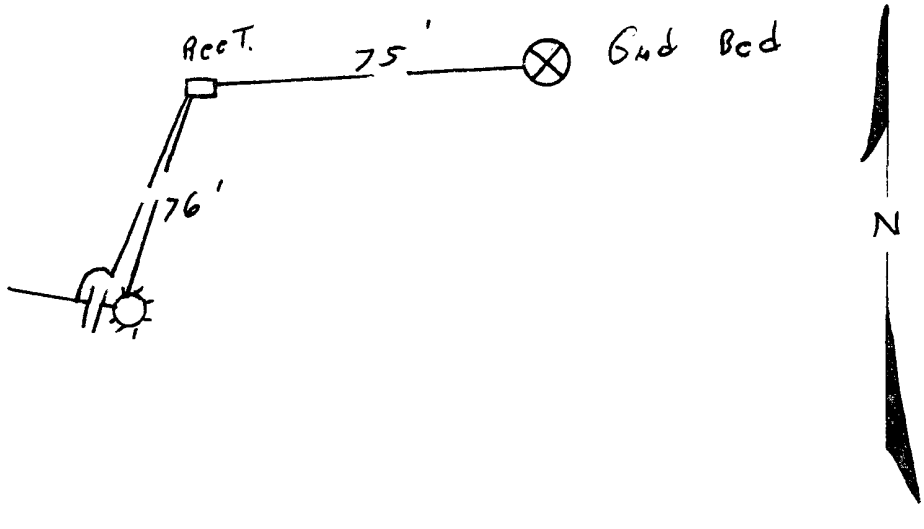
Remarks: STATIC 600' N = .96 V Driller said water at 100' Approx. 10-15 gal/min. Drilled to 300'. Logged 300'. Installed 200' of 1" P.V.C. vent pipe, perforated 200'. Had a Bridge above #3 Anode. Installed #11 Anode to Replace it.

Pitch of Cable = 151'
Extra Cable = 96'
Hole Depth = 200'
Stub Pole & 40V 16A Rect

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

6167

El Paso Natural Gas Company

ENGINEERING CALCULATION

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

ATLANTIC B # 6A

CPS – 446W   NW 33-31-10   W.O. 57325-21

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

100 –
10 –
2.0
20 – 2.0 –
1.9
30 – 1.1
2.1 – ⑩
40 – 2.3
2.2 – ⑨
50 – 1.7
1.5
60 – 1.3
1.0
70 – 1.0
1.0
80 – .9
1.0
90 – 2.0 – ⑧
2.8
200 – 2.8 – ⑦
2.7
10 – 2.5 – ⑥
2.1
20 – 1.7 – ⑤
1.7
30 – 1.6 – ④
1.3
40 – 1.4
1.4 – ③
50 – 1.3
2.0
60 – 2.0 – ②
2.0
70 – 1.8 – ①
1.8
80 – 1.8
1.5
90 – 1.0
.9
300 – T.D.

Driller said water at 100'. Aprox. 10-15 gal./min. Drilled to 300'. Logged 300'. Installed 300' of 1" P.V.C. vent pipe, perferated 200'. Had a bridge above #3 anode. Installed #11 anode to replace it.

7/12/79
JA
20 Hrs Total

1 – 270 – 1.9 – 2.3
2 – 260 – 2.4 – 2.9
3 – 245 – 1.5 – 1.4
4 – 230 – 1.6 – 1.9
5 – 220 – 2.2 – 2.5
6 – 210 – 3.4 – 4.0
7 – 200 – 4.0 – 4.2
8 – 190 – 2.5 – 3.2
9 – 145 – 2.4 – 3.5
10 – 135 – 3.0 – 3.9
11 – 120 – 2.5 – 2.6

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ___ of ___
Date:
By:
File:

ATLANTIC B #6A

CPS-1446 W   NW 33-31-10   W.O. 57325-21

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

100 — .7
.8
10 — .6
.7
20 — .8
.8
30 — 1.0
1.3
40 — 2.1
2.0 —
50 — 1.2
1.3
60 — 1.2
1.3
70 — 1.4 —
1.3
80 — 1.1
1.1
90 — 1.7
2.6 —
200 — 2.8
2.6 —
10 — 2.6
2.5 —
20 — 1.8
1.7 —
30 — 1.6
1.7 —
40 — 1.6
1.4
50 — 1.1
1.0
60 — 1.9 —
2.0
70 — 1.9 —
1.9
80 — 1.9 —
1.7
90 — 1.2
.6
300 — — T.D.

Driller said water at 100'. Drilled to 280' and twisted off. Drilled to 300'. Logged 300'. Hole making 15-20 gal/min. Installed 300' of 1" P.V.C. vent pipe, perforated 200'. Ran 4 anodes in hole. Started cokeing. Hole caved in. Retrieved 2 anodes. Lost 2 anodes & vent pipe in hole.

Moved rig & started new hole.

7/11/79
JL

1 — 280 — 2.1
2 — 270 —
3 — 260 —
4 — 235 —
5 — 225 —
6 — 215 —
7 — 205 —
8 — 195 —
9 — 170 —
10 — 145 —

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

Analysis No. 1-9660 Date 8-3-79

Operator EPNG Well Name ATLANTIC B6A

Location NW 33-31-10 County SAN JUAN State NM

Field Formation

Sampled From CPS 1446-W

Date Sampled By

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

	ppm	epm		ppm	epm
Sodium	138	6	Chloride	28	1
Calcium	568	28	Bicarbonate	73	1
Magnesium	12	1	Sulfate	1600	33
Iron	PRESENT		Carbonate	0	0
H_2S	ABSENT		Hydroxide	0	0

Total Solids Dissolved 2898

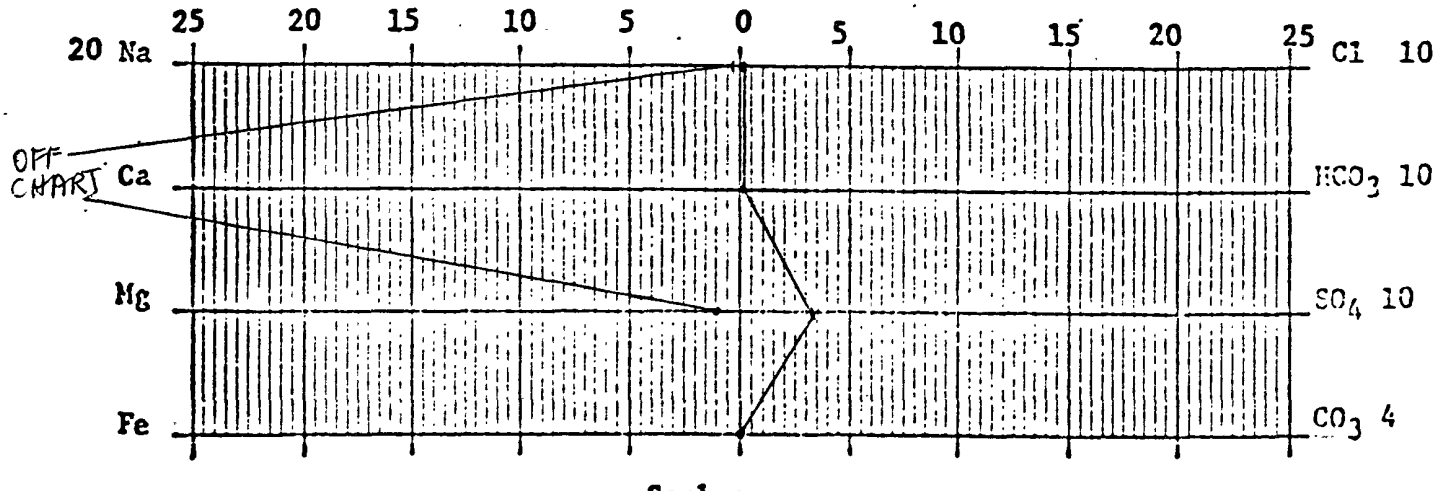
pH 7.2

Sp. Gr. 1.0035 at 60°F

Resistivity 330 ohm-cm at 75 °F

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

Cheryl Tenwilleger
Chemist



Scale: epm

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE WELL NO. #1446W ReDrill CONTRACTOR Posey RIG NO. REPORT NO. DATE 7-12- 1979

MORNING

Driller Total Men In Crew

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

BIT NO. NO. DC SIZE LENG.

SE. 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	10	SANDSTONE SURFACE
10	30	SANDSTONE
30	35	SAND DAMP
35	65	SANDSTONE
65	70	SHALE
70	78	SAND (WET)

REMARKS –

DAYLIGHT

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
				T.D. 300'
				LOGGED 300'

BIT NO. NO. DC SIZE LENG.

SERIAL NO. NO. DC SIZE LENG.

SIZE 6 3/4" STANDS

TYPE SINGLES

MAKE DOWN ON KELLY

TOTAL DEPTH

MUD RECORD

Time	Wt.	Vis.

MUD, ADDITIVES USED AND RECEIVED

FROM	TO	TIME BREAKDOWN
78	82	SANDSTONE
82	100	SAND (WET)
100	110	SHALE
110	140	SANDY SHALE
140	165	SHALE
165	172	SANDY 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
172	217	SHALE
217	250	SANDY SHALE
250	300	SHALE

REMARKS –

Approximately 15 gal per min @ 100'

SIGNED: Toolpusher Posey Company Supervisor Jeff Murphy

6 - 30-045-10047 4297

20 - 30-045-23496

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 33 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC B #6, #20

cps 371w

Elevation 6294' Completion Date 11/5/76 Total Depth 292' 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: 48 SACKS

Depths anodes placed: 275', 265', 255', 185', 175'

Depths vent pipes placed: N/A

Vent pipe perforations: 185'

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.

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 11-5-76

Well Name	Location	CPS No.
ATLANTIC B #6	SW 33-31-10	371W
Type & Size Bit Used: 6 3/4		Work Order No.: 52104

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
Log 292		48 Sacks		

	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
Anode Depth	275	265	255	185	175					
Anode Output (Amps)	2.2	3.7	3.9	3.4	3.9					

	# 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 12.0	Amps 10.7	Ohms 1.12		

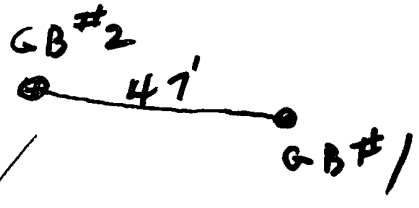
Remarks: DRILLER SAID WATER @ 105'
Vent Perf. 185'
SLURRY 48 SACKS

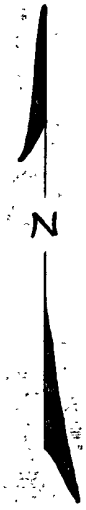
$2,648.00
-174.00 Depth Credit
19.95
$2,493.95
99.75 TAX
2,593.70
288.00 Coke
213.40 Insp.
50.00 Misc.
$3,145.10 TOTAL

All Construction Completed

C. W. Hines
(Signature)

GROUND BED LAYOUT SKETCH





D

Original & 1 Copy All Reports

Form 7-1 (Rev. 8-75)

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ____ of ____
Date: 11-5-76
By:
File:

ATLANTIC B #6 371 SW 33-31-10 371 S2 104

371W

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
86.16	C_8	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

MW	MISC.	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

100 .4 .5
10 .9 1.0
20 1.0
1.0
30 1.0 1.1
40 1.0 .9
50 .6 .5
60 .6 .4
20 .4
11 X
80 1.6 X
1.3
90 .6 .8 .8
200 .8 .7
10 .7 .7
20 .7
.8
30 .8 1.0
40 1.1 1.1
50 1.4
2.2 X
60 2.4
2.2 X
70 1.4
1.4 X
80 1.1 1.0
90 292 T.D.
300

1	275	1.5 - 2.2
2	265	2.6 - 3.7
3	255	2.5 - 3.9
4	185	1.3 - 3.4
5	175	1.6 - 3.9

VENT PERF. 185'

10.7 A
12.0 U

= 1.12 Ω CR

Form 22-2 (Rev. 1-61)

EL PASO NATURAL GAS COMPANY
DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE | WELL NO. 27-W | CONTRACTOR | RIG NO. | REPORT NO. | DATE 11-5-78 19

MORNING

Driller | Total Men In Crew

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

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
0	10	Surface Sand Damp
10	75	Shale
75	85	Sand Stone Dry
85	90	Shale
90	105	Sand wet
105	110	Sand ~~wet~~ Stone

REMARKS –
110-150 Shale
150-175 Sand wet
175-178 Sand Stone
178-195 Shale
195-220 Sand wet
220-245 Shale
245-300 ~~Sand~~ Sandy Shale

DAYLIGHT

Driller Posey | Total Men In Crew

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

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 –

EVENING

Driller | Total Men In Crew

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

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 – Water to 105 at 90'

SIGNED: Toolpusher _____ Company Supervisor _____

ENSOLUM

APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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

2. Originating Site:
Hart Canyon CS #1

AFE: Pending
PM: John Irvine
Pay Key: RB21200

3. Location of Material (Street Address, City, State or ULSTR):
UL H Section 29 T31 R10W; 36.872835, -107.900426

Feb/March 2024

4. Source and Description of Waste:
Source: Hydrocarbon contaminated soil/water/sludge remediation of a natural gas condensate release.
Description: Hydrocarbon contaminated soil/water/sludge remediation of a natural gas condensate release.
Estimated Volume _20_ yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 89/45 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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

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

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) 2-23-2024, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

6. Transporter: Halo, Riley

OCD Permitted Surface Waste Management Facility

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

Waste Acceptance Status:

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

PRINT NAME: Greg Crabtree TITLE: Envirotech Manager DATE: 2/23/24

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

ENSOLUM

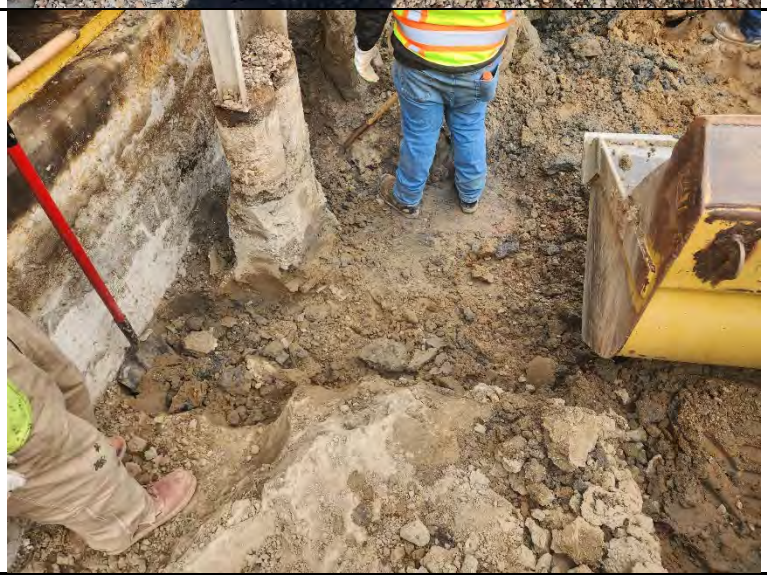
APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Ensolum Project No. 05A1226310

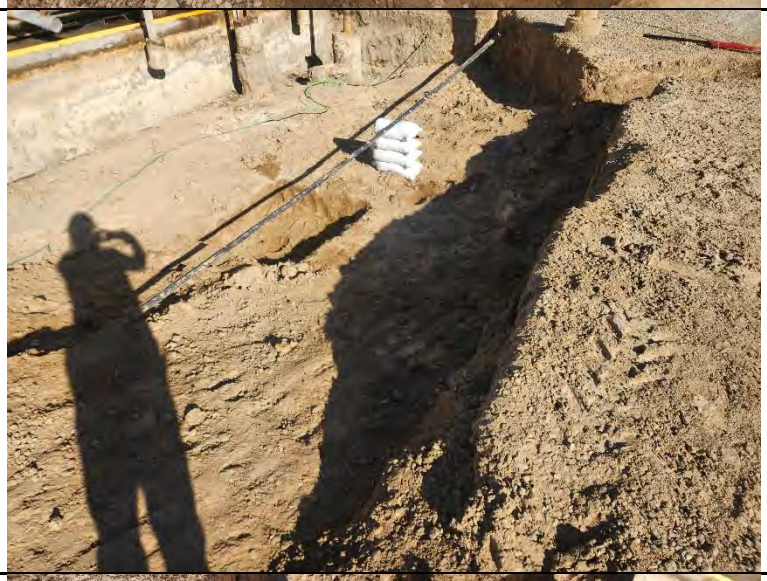
ENSOLUM

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

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Ensolum Project No. 05A1226310

ENSOLUM

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

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Ensolum Project No. 05A1226310

ENSOLUM

Photograph 7 Photograph Description: View of final flow-path excavation.	
Photograph 8 Photograph Description: View of the stained area.	
Photograph 9 Photograph Description: View of the stained area.	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Hart Canyon #1 Compressor Station (02/26/24)
Ensolum Project No. 05A1226310

ENSOLUM

Photograph 10 Photograph Description: View of the stained area.	
Photograph 11 Photograph Description: View of the site after initial restoration.	
Photograph 12 Photograph Description: View of the site after initial restoration.	

ENSOLUM

APPENDIX E

Regulatory Correspondence

Long, Thomas

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Wednesday, March 6, 2024 8:45 AM
To: Long, Thomas
Subject: Re: [EXTERNAL] Hart Canyon #1 Compressor Station - UL D-29-31N-10W ; 36.872656,-107.900192; NaPP2405737852

[Use caution with links/attachments]

Good morning 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.

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

Regards,

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Wednesday, March 6, 2024 8:43 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: [EXTERNAL] Hart Canyon #1 Compressor Station - UL D-29-31N-10W ; 36.872656,-107.900192; NaPP2405737852

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 today at the Hart Canyon #1 Compressor Station excavation. We are almost finished with the remediation and would like to sample today. I will submit the C-141N for today as well. 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: 318184
Date: Tuesday, February 27, 2024 1:13:07 PM

[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#) nAPP2405737852.

The sampling event is expected to take place:

When: 03/01/2024 @ 09:00
Where: D-29-31N-10W 0 FNL 0 FEL (36.872656,-107.900192)

Additional Information: Ensolum, LLC

Additional Instructions: 36.872656,-107.900192

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: OCDOnline@state.nm.us
To: Long, Thomas
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has accepted the application, Application ID: 320659
Date: Wednesday, March 6, 2024 8:46:04 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#) nAPP2405737852.

The sampling event is expected to take place:

When: 03/06/2024 @ 12:00
Where: D-29-31N-10W 0 FNL 0 FEL (36.872656,-107.900192)

Additional Information: Ensolum, LLC

Additional Instructions: 36.872656,-107.900192

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: OCDOnline@state.nm.us
To: Long, Thomas
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has accepted the application, Application ID: 322532
Date: Tuesday, March 12, 2024 10:32:22 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#) nAPP2405737852.

The sampling event is expected to take place:

When: 03/14/2024 @ 10:35
Where: D-29-31N-10W 0 FNL 0 FEL (36.872656,-107.900192)

Additional Information: Ensolum, LLC

Additional Instructions: 36.872656,-107.900192

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

ENSOLUM

APPENDIX F

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Hart Canyon #1 Compressor Station (02/26/24)
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**
Composite Soil Samples From Soils Removed by Excavation and Transported to the Landfarm for Disposal/Remediation													
S-1	3.01.24	C	3.5 to 4	<0.022	0.46	0.50	6.6	7.6	100	9.8	<46	**110**	<60
FP-1	3.01.24	C	0.25	<0.021	<0.042	<0.042	<0.084	ND	<4.2	16	120	**140**	<60
Excavation Composite Soil Samples													
S-2	3.01.24	C	3.5 to 4	<0.019	0.064	0.039	0.46	0.56	7.1	<9.0	<45	7.1	<60
S-3	3.01.24	C	0 to 4	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.2	<46	ND	100
S-4	3.01.24	C	0 to 4	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.1	<45	ND	<60
S-5	3.01.24	C	0 to 3.5	<0.021	<0.042	<0.042	0.28	0.28	5.0	<9.5	<47	5.0	<61
S-6	3.06.24	C	3.5 to 4	<0.12	1.1	0.82	15	17	290	60	370	**720**	<59
S-7	3.06.24	C	3.5 to 4.5	<0.019	<0.037	<0.037	<0.075	ND	<3.7	<9.2	<46	ND	<61
FP-2	3.06.24	C	0.25 to 0.5	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.1	<45	ND	<60
GS-1	3.14.24	G	0.5	<0.90	4.5	4.4	220	**230**	2,500	6,200	33,000	**42,000**	<61
Hand Auger Soil Boring Samples													
HA-1 (7.5 - 8')	3.14.24	G	7.5 to 8	0.021	<0.032	0.079	0.23	0.33	4.7	<8.9	<45	4.7	<60
HA-1 (8 - 8.5')	3.14.24	G	8 to 8.5	0.026	<0.032	0.074	0.32	0.42	10	<9.0	<45	10	<60
HA-1 (8.5 - 9')	3.14.24	G	8.5 to 9	<0.018	<0.035	<0.035	<0.071	ND	<3.5	<9.7	<48	ND	<59

*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

ENSOLUM

APPENDIX G

Laboratory Data Sheets & Chain of Custody Documentation

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 11, 2024

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

RE: Hart CS 1 OrderNo.: 2403056

Dear Kyle Summers:

Eurofins Environment Testing South Central, LLC received 6 sample(s) on 3/2/2024 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2403056**
Date Reported: **3/11/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Hart CS 1 **Collection Date:** 3/1/2024 9:00:00 AM
Lab ID: 2403056-001 **Matrix:** MEOH (SOIL) **Received Date:** 3/2/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/4/2024 11:56:57 AM	80760
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	9.8	9.1		mg/Kg	1	3/4/2024 12:18:41 PM	80764
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/4/2024 12:18:41 PM	80764
Surr: DNOP	126	61.2-134		%Rec	1	3/4/2024 12:18:41 PM	80764
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	100	4.3		mg/Kg	1	3/4/2024 1:14:51 PM	GS10348
Surr: BFB	801	15-244	S	%Rec	1	3/4/2024 1:14:51 PM	GS10348
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.022		mg/Kg	1	3/4/2024 1:14:51 PM	BS10348
Toluene	0.46	0.043		mg/Kg	1	3/4/2024 1:14:51 PM	BS10348
Ethylbenzene	0.50	0.043		mg/Kg	1	3/4/2024 1:14:51 PM	BS10348
Xylenes, Total	6.6	0.086		mg/Kg	1	3/4/2024 1:14:51 PM	BS10348
Surr: 4-Bromofluorobenzene	130	39.1-146		%Rec	1	3/4/2024 1:14:51 PM	BS10348

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

Qualifiers:

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

Analytical Report
Lab Order **2403056**
Date Reported: **3/11/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Hart CS 1 **Collection Date:** 3/1/2024 9:10:00 AM
Lab ID: 2403056-002 **Matrix:** MEOH (SOIL) **Received Date:** 3/2/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/4/2024 12:12:06 PM	80760
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	3/4/2024 12:30:46 PM	80764
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/4/2024 12:30:46 PM	80764
Surr: DNOP	113	61.2-134		%Rec	1	3/4/2024 12:30:46 PM	80764
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	7.1	3.7		mg/Kg	1	3/4/2024 4:25:58 PM	GS10348
Surr: BFB	154	15-244		%Rec	1	3/4/2024 4:25:58 PM	GS10348
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	3/4/2024 4:25:58 PM	BS10348
Toluene	0.064	0.037		mg/Kg	1	3/4/2024 4:25:58 PM	BS10348
Ethylbenzene	0.039	0.037		mg/Kg	1	3/4/2024 4:25:58 PM	BS10348
Xylenes, Total	0.46	0.074		mg/Kg	1	3/4/2024 4:25:58 PM	BS10348
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	3/4/2024 4:25:58 PM	BS10348

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

Qualifiers:

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

Analytical Report
Lab Order **2403056**
Date Reported: **3/11/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Hart CS 1 **Collection Date:** 3/1/2024 9:20:00 AM
Lab ID: 2403056-003 **Matrix:** MEOH (SOIL) **Received Date:** 3/2/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	100	60		mg/Kg	20	3/4/2024 12:27:15 PM	80760
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/4/2024 12:42:50 PM	80764
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/4/2024 12:42:50 PM	80764
Surr: DNOP	116	61.2-134		%Rec	1	3/4/2024 12:42:50 PM	80764
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	3/4/2024 2:02:48 PM	GS10348
Surr: BFB	110	15-244		%Rec	1	3/4/2024 2:02:48 PM	GS10348
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	3/4/2024 2:02:48 PM	BS10348
Toluene	ND	0.038		mg/Kg	1	3/4/2024 2:02:48 PM	BS10348
Ethylbenzene	ND	0.038		mg/Kg	1	3/4/2024 2:02:48 PM	BS10348
Xylenes, Total	ND	0.076		mg/Kg	1	3/4/2024 2:02:48 PM	BS10348
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	3/4/2024 2:02:48 PM	BS10348

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

Qualifiers:

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

Analytical Report
Lab Order **2403056**
Date Reported: **3/11/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Hart CS 1 **Collection Date:** 3/1/2024 9:30:00 AM
Lab ID: 2403056-004 **Matrix:** MEOH (SOIL) **Received Date:** 3/2/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/4/2024 12:42:24 PM	80760
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/4/2024 12:54:54 PM	80764
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/4/2024 12:54:54 PM	80764
Surr: DNOP	122	61.2-134		%Rec	1	3/4/2024 12:54:54 PM	80764
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/4/2024 2:26:48 PM	GS10348
Surr: BFB	124	15-244		%Rec	1	3/4/2024 2:26:48 PM	GS10348
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	3/4/2024 2:26:48 PM	BS10348
Toluene	ND	0.049		mg/Kg	1	3/4/2024 2:26:48 PM	BS10348
Ethylbenzene	ND	0.049		mg/Kg	1	3/4/2024 2:26:48 PM	BS10348
Xylenes, Total	ND	0.098		mg/Kg	1	3/4/2024 2:26:48 PM	BS10348
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	3/4/2024 2:26:48 PM	BS10348

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

Qualifiers:

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

Analytical Report
Lab Order **2403056**
Date Reported: **3/11/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Hart CS 1 **Collection Date:** 3/1/2024 9:40:00 AM
Lab ID: 2403056-005 **Matrix:** MEOH (SOIL) **Received Date:** 3/2/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	61		mg/Kg	20	3/4/2024 12:57:34 PM	80760
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/4/2024 1:06:52 PM	80764
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/4/2024 1:06:52 PM	80764
Surr: DNOP	112	61.2-134		%Rec	1	3/4/2024 1:06:52 PM	80764
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	5.0	4.2		mg/Kg	1	3/4/2024 3:14:37 PM	GS10348
Surr: BFB	145	15-244		%Rec	1	3/4/2024 3:14:37 PM	GS10348
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.021		mg/Kg	1	3/4/2024 3:14:37 PM	BS10348
Toluene	ND	0.042		mg/Kg	1	3/4/2024 3:14:37 PM	BS10348
Ethylbenzene	ND	0.042		mg/Kg	1	3/4/2024 3:14:37 PM	BS10348
Xylenes, Total	0.28	0.084		mg/Kg	1	3/4/2024 3:14:37 PM	BS10348
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	3/4/2024 3:14:37 PM	BS10348

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

Qualifiers:

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

Analytical Report
Lab Order **2403056**
Date Reported: **3/11/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** FP-1
Project: Hart CS 1 **Collection Date:** 3/1/2024 9:50:00 AM
Lab ID: 2403056-006 **Matrix:** MEOH (SOIL) **Received Date:** 3/2/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/4/2024 1:12:43 PM	80760
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**	
Diesel Range Organics (DRO)	16	9.6		mg/Kg	1	3/4/2024 1:18:58 PM	80764
Motor Oil Range Organics (MRO)	120	48		mg/Kg	1	3/4/2024 1:18:58 PM	80764
Surr: DNOP	127	61.2-134		%Rec	1	3/4/2024 1:18:58 PM	80764
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/4/2024 2:50:45 PM	GS10348
Surr: BFB	109	15-244		%Rec	1	3/4/2024 2:50:45 PM	GS10348
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.021		mg/Kg	1	3/4/2024 2:50:45 PM	BS10348
Toluene	ND	0.042		mg/Kg	1	3/4/2024 2:50:45 PM	BS10348
Ethylbenzene	ND	0.042		mg/Kg	1	3/4/2024 2:50:45 PM	BS10348
Xylenes, Total	ND	0.084		mg/Kg	1	3/4/2024 2:50:45 PM	BS10348
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	3/4/2024 2:50:45 PM	BS10348

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2403056**

11-Mar-24

Client: ENSOLUM

Project: Hart CS 1

Sample ID: **MB-80760**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **80760**	RunNo: **103490**							
Prep Date: **3/4/2024**	Analysis Date: **3/4/2024**	SeqNo: **3830650**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-80760**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **80760**	RunNo: **103490**							
Prep Date: **3/4/2024**	Analysis Date: **3/4/2024**	SeqNo: **3830651**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2403056**

11-Mar-24

Client: ENSOLUM

Project: Hart CS 1

Sample ID: **MB-80764**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80764**	RunNo: **103485**
Prep Date: **3/4/2024**	Analysis Date: **3/4/2024**	SeqNo: **3829766** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	61.2	134			

Sample ID: **LCS-80764**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80764**	RunNo: **103485**
Prep Date: **3/4/2024**	Analysis Date: **3/4/2024**	SeqNo: **3829767** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.2	59.7	135			
Surr: DNOP	5.3		5.000		106	61.2	134			

Sample ID: **2403056-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **FP-1**	Batch ID: **80764**	RunNo: **103485**
Prep Date: **3/4/2024**	Analysis Date: **3/4/2024**	SeqNo: **3829774** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.2	45.91	15.72	62.2	43.7	136			
Surr: DNOP	5.0		4.591		109	61.2	134			

Sample ID: **2403056-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **FP-1**	Batch ID: **80764**	RunNo: **103485**
Prep Date: **3/4/2024**	Analysis Date: **3/4/2024**	SeqNo: **3829775** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.0	45.17	15.72	74.4	43.7	136	10.8	31.3	
Surr: DNOP	5.3		4.517		118	61.2	134	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2403056**

11-Mar-24

Client: ENSOLUM

Project: Hart CS 1

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS103486**	RunNo: **103486**
Prep Date:	Analysis Date: **3/4/2024**	SeqNo: **3829762** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	70	130			
Surr: BFB	2300		1000		225	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS103486**	RunNo: **103486**
Prep Date:	Analysis Date: **3/4/2024**	SeqNo: **3829763** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		107	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2403056**

11-Mar-24

Client: ENSOLUM

Project: Hart CS 1

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS103486**	RunNo: **103486**
Prep Date:	Analysis Date: **3/4/2024**	SeqNo: **3829783** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	39.1	146			

Qualifiers:

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

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Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2403056** RcptNo: **1**

Received By: **Cheyenne Cason** **3/2/2024 8:00:00 AM** CC

Completed By: **Cheyenne Cason** **3/2/2024 8:32:08 AM** CC

Reviewed By: DAD 3/2/24

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: MC 3/2/24

Special Handling (If applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.0	Good	Yes	Yogi		

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: Hart CS #1

Project #: 05A1276310

Project Manager: K Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No Yogi

# of Coolers: 1

Cooler Temp (Including CF): 0.1 -0.F 0.0 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2403056	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)
~~3/1/24~~	9:00	S	S-1	1 4oz jar	Cool	001	X	X					X			
3/1/24	9:10	S	S-2			002	X	X					X			
3/1/24	9:20	S	S-3			003	X	X					X			
3/1/24	9:30	S	S-4			004	X	X					X			
3/1/24	9:40	S	S-5			005	X	X					X			
3/1/24	9:50	S	FD-1			006	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/1/24	1502				3/1/24	1502
3/1/24	1720				3/2/24	0800

Remarks:
PM Tom Long
Pay Key: ~~RB~~ RBJ1200 CD
Non AFE# N72412
Same-Day

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/7/2024 4:56:00 PM

JOB DESCRIPTION

Ensoum Aztec / Enterprise

JOB NUMBER

885-647-1

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
3/7/2024 4:56:00 PM

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

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Laboratory Job ID: 885-647-1

Table of Contents

Definitions/Glossary

Client: Ensolum Aztec Job ID: 885-647-1
Project/Site: Ensoum Aztec / Enterprise

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 Aztec
Project: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Job ID: 885-647-1 Eurofins Albuquerque

Job Narrative
885-647-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 3/7/2024 7:15 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 2.6°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.

Detection Summary

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Client Sample ID: S-6 Lab Sample ID: 885-647-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics [C6 - C10]	290		24		mg/Kg	5		8015D	Total/NA
Ethylbenzene	1.1		0.24		mg/Kg	5		8021B	Total/NA
Toluene	0.82		0.24		mg/Kg	5		8021B	Total/NA
Xylenes, Total	15		0.48		mg/Kg	5		8021B	Total/NA
Diesel Range Organics [C10-C28]	60		8.9		mg/Kg	1		8015D	Total/NA
Motor Oil Range Organics [C28-C40]	370		45		mg/Kg	1		8015D	Total/NA

Client Sample ID: S-7 Lab Sample ID: 885-647-2

No Detections.

Client Sample ID: FP-2 Lab Sample ID: 885-647-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Albuquerque

Client Sample Results

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Client Sample ID: S-6

Date Collected: 03/06/24 09:05
Date Received: 03/07/24 07:15

Lab Sample ID: 885-647-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**290**		24		mg/Kg		03/07/24 10:41	03/07/24 13:08	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*384*	*S1+*	*15 - 244*	*03/07/24 10:41*	*03/07/24 13:08*	*5*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.12		mg/Kg		03/07/24 10:41	03/07/24 13:08	5
Ethylbenzene	**1.1**		0.24		mg/Kg		03/07/24 10:41	03/07/24 13:08	5
Toluene	**0.82**		0.24		mg/Kg		03/07/24 10:41	03/07/24 13:08	5
Xylenes, Total	**15**		0.48		mg/Kg		03/07/24 10:41	03/07/24 13:08	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*39 - 146*	*03/07/24 10:41*	*03/07/24 13:08*	*5*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**60**		8.9		mg/Kg		03/07/24 09:02	03/07/24 11:20	1
Motor Oil Range Organics [C28-C40]	**370**		45		mg/Kg		03/07/24 09:02	03/07/24 11:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*104*		*69 - 147*	*03/07/24 09:02*	*03/07/24 11:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		59		mg/Kg		03/07/24 10:52	03/07/24 12:29	20

Client Sample ID: S-7

Date Collected: 03/06/24 09:15
Date Received: 03/07/24 07:15

Lab Sample ID: 885-647-2
Matrix: Solid

Method: SW846 8015D - 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		03/07/24 10:41	03/07/24 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*15 - 244*	*03/07/24 10:41*	*03/07/24 11:59*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.019		mg/Kg		03/07/24 10:41	03/07/24 11:59	1
Ethylbenzene	ND		0.037		mg/Kg		03/07/24 10:41	03/07/24 11:59	1
Toluene	ND		0.037		mg/Kg		03/07/24 10:41	03/07/24 11:59	1
Xylenes, Total	ND		0.075		mg/Kg		03/07/24 10:41	03/07/24 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*39 - 146*	*03/07/24 10:41*	*03/07/24 11:59*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2		mg/Kg		03/07/24 09:02	03/07/24 11:31	1

Client Sample Results

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Client Sample ID: S-7
Date Collected: 03/06/24 09:15
Date Received: 03/07/24 07:15

Lab Sample ID: 885-647-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		03/07/24 09:02	03/07/24 11:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*99*		*69 - 147*	*03/07/24 09:02*	*03/07/24 11:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		61		mg/Kg		03/07/24 10:52	03/07/24 12:44	20

Client Sample ID: FP-2
Date Collected: 03/06/24 09:25
Date Received: 03/07/24 07:15

Lab Sample ID: 885-647-3
Matrix: Solid

Method: SW846 8015D - 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		03/07/24 10:41	03/07/24 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*03/07/24 10:41*	*03/07/24 12:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.022		mg/Kg		03/07/24 10:41	03/07/24 12:23	1
Ethylbenzene	ND		0.043		mg/Kg		03/07/24 10:41	03/07/24 12:23	1
Toluene	ND		0.043		mg/Kg		03/07/24 10:41	03/07/24 12:23	1
Xylenes, Total	ND		0.086		mg/Kg		03/07/24 10:41	03/07/24 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*	*03/07/24 10:41*	*03/07/24 12:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.1		mg/Kg		03/07/24 09:02	03/07/24 11:42	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		03/07/24 09:02	03/07/24 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*69 - 147*	*03/07/24 09:02*	*03/07/24 11:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		03/07/24 10:52	03/07/24 12:59	20

Surrogate Summary

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (15-244)
885-647-1	S-6	384 S1+
885-647-2	S-7	103
885-647-3	FP-2	99
LCS 885-1414/5-A	Lab Control Sample	212
MB 885-1414/4-A	Method Blank	99

Surrogate Legend
BFB = 4-Bromofluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (39-146)
885-647-1	S-6	106
885-647-2	S-7	96
885-647-3	FP-2	93
LCS 885-1414/6-A	Lab Control Sample	95
MB 885-1414/4-A	Method Blank	93

Surrogate Legend
BFB = 4-Bromofluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DNOP (69-147)
885-647-1	S-6	104
885-647-2	S-7	99
885-647-3	FP-2	102
885-647-3 MS	FP-2	101
885-647-3 MSD	FP-2	95
LCS 885-1402/2-A	Lab Control Sample	89
MB 885-1402/1-A	Method Blank	95

Surrogate Legend
DNOP = Di-n-octyl phthalate (Surr)

QC Sample Results

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

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

Lab Sample ID: MB 885-1414/4-A
Matrix: Solid
Analysis Batch: 1433

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1414

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.10		mg/Kg		03/07/24 11:02	03/07/24 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*03/07/24 11:02*	*03/07/24 11:12*	*1*

Lab Sample ID: LCS 885-1414/5-A
Matrix: Solid
Analysis Batch: 1433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1414

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			0.500	0.532		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*212*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-1414/4-A
Matrix: Solid
Analysis Batch: 1434

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1414

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00050		mg/Kg		03/07/24 11:02	03/07/24 11:12	1
Ethylbenzene	ND		0.0010		mg/Kg		03/07/24 11:02	03/07/24 11:12	1
Toluene	ND		0.0010		mg/Kg		03/07/24 11:02	03/07/24 11:12	1
Xylenes, Total	ND		0.0020		mg/Kg		03/07/24 11:02	03/07/24 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*	*03/07/24 11:02*	*03/07/24 11:12*	*1*

Lab Sample ID: LCS 885-1414/6-A
Matrix: Solid
Analysis Batch: 1434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1414

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0200	0.0166		mg/Kg		83	70 - 130		
Ethylbenzene			0.0200	0.0177		mg/Kg		88	70 - 130		
o-Xylene			0.0200	0.0176		mg/Kg		88	70 - 130		
Toluene			0.0200	0.0174		mg/Kg		87	70 - 130		
Xylenes, Total			0.0600	0.0536		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*

QC Sample Results

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

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

Lab Sample ID: MB 885-1402/1-A
Matrix: Solid
Analysis Batch: 1425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1402

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		03/07/24 09:02	03/07/24 10:59	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		03/07/24 09:02	03/07/24 10:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*69 - 147*	*03/07/24 09:02*	*03/07/24 10:59*	*1*

Lab Sample ID: LCS 885-1402/2-A
Matrix: Solid
Analysis Batch: 1425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1402

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	46.4		mg/Kg		93	62 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*89*		*69 - 147*

Lab Sample ID: 885-647-3 MS
Matrix: Solid
Analysis Batch: 1425

Client Sample ID: FP-2
Prep Type: Total/NA
Prep Batch: 1402

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		47.5	43.0		mg/Kg		91	54 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*101*		*69 - 147*

Lab Sample ID: 885-647-3 MSD
Matrix: Solid
Analysis Batch: 1425

Client Sample ID: FP-2
Prep Type: Total/NA
Prep Batch: 1402

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		45.4	40.0		mg/Kg		88	54 - 135	7	29

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*95*		*69 - 147*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-1415/1-A
Matrix: Solid
Analysis Batch: 1436

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1415

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		03/07/24 10:52	03/07/24 11:59	1

QC Sample Results

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-1415/2-A
Matrix: Solid
Analysis Batch: 1436

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1415

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.9		mg/Kg		96	90 - 110		

QC Association Summary

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

GC VOA

Prep Batch: 1414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	5035	
885-647-2	S-7	Total/NA	Solid	5035	
885-647-3	FP-2	Total/NA	Solid	5035	
MB 885-1414/4-A	Method Blank	Total/NA	Solid	5035	
LCS 885-1414/5-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-1414/6-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 1433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	8015D	1414
885-647-2	S-7	Total/NA	Solid	8015D	1414
885-647-3	FP-2	Total/NA	Solid	8015D	1414
MB 885-1414/4-A	Method Blank	Total/NA	Solid	8015D	1414
LCS 885-1414/5-A	Lab Control Sample	Total/NA	Solid	8015D	1414

Analysis Batch: 1434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	8021B	1414
885-647-2	S-7	Total/NA	Solid	8021B	1414
885-647-3	FP-2	Total/NA	Solid	8021B	1414
MB 885-1414/4-A	Method Blank	Total/NA	Solid	8021B	1414
LCS 885-1414/6-A	Lab Control Sample	Total/NA	Solid	8021B	1414

GC Semi VOA

Prep Batch: 1402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	SHAKE	
885-647-2	S-7	Total/NA	Solid	SHAKE	
885-647-3	FP-2	Total/NA	Solid	SHAKE	
MB 885-1402/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-1402/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-647-3 MS	FP-2	Total/NA	Solid	SHAKE	
885-647-3 MSD	FP-2	Total/NA	Solid	SHAKE	

Analysis Batch: 1425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	8015D	1402
885-647-2	S-7	Total/NA	Solid	8015D	1402
885-647-3	FP-2	Total/NA	Solid	8015D	1402
MB 885-1402/1-A	Method Blank	Total/NA	Solid	8015D	1402
LCS 885-1402/2-A	Lab Control Sample	Total/NA	Solid	8015D	1402
885-647-3 MS	FP-2	Total/NA	Solid	8015D	1402
885-647-3 MSD	FP-2	Total/NA	Solid	8015D	1402

HPLC/IC

Prep Batch: 1415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	300_Prep	
885-647-2	S-7	Total/NA	Solid	300_Prep	
885-647-3	FP-2	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

HPLC/IC (Continued)

Prep Batch: 1415 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-1415/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-1415/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 1436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-647-1	S-6	Total/NA	Solid	300.0	1415
885-647-2	S-7	Total/NA	Solid	300.0	1415
885-647-3	FP-2	Total/NA	Solid	300.0	1415
MB 885-1415/1-A	Method Blank	Total/NA	Solid	300.0	1415
LCS 885-1415/2-A	Lab Control Sample	Total/NA	Solid	300.0	1415

Lab Chronicle

Client: Ensolum Aztec
Job ID: 885-647-1
Project/Site: Ensoum Aztec / Enterprise

Client Sample ID: S-6
Lab Sample ID: 885-647-1
Date Collected: 03/06/24 09:05
Matrix: Solid
Date Received: 03/07/24 07:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1414	JP	EET ALB	03/07/24 10:41
Total/NA	Analysis	8015D		5	1433	JP	EET ALB	03/07/24 13:08
Total/NA	Prep	5035			1414	JP	EET ALB	03/07/24 10:41
Total/NA	Analysis	8021B		5	1434	JP	EET ALB	03/07/24 13:08
Total/NA	Prep	SHAKE			1402	JU	EET ALB	03/07/24 09:02
Total/NA	Analysis	8015D		1	1425	PD	EET ALB	03/07/24 11:20
Total/NA	Prep	300_Prep			1415	JT	EET ALB	03/07/24 10:52
Total/NA	Analysis	300.0		20	1436	JT	EET ALB	03/07/24 12:29

Client Sample ID: S-7
Lab Sample ID: 885-647-2
Date Collected: 03/06/24 09:15
Matrix: Solid
Date Received: 03/07/24 07:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1414	JP	EET ALB	03/07/24 10:41
Total/NA	Analysis	8015D		1	1433	JP	EET ALB	03/07/24 11:59
Total/NA	Prep	5035			1414	JP	EET ALB	03/07/24 10:41
Total/NA	Analysis	8021B		1	1434	JP	EET ALB	03/07/24 11:59
Total/NA	Prep	SHAKE			1402	JU	EET ALB	03/07/24 09:02
Total/NA	Analysis	8015D		1	1425	PD	EET ALB	03/07/24 11:31
Total/NA	Prep	300_Prep			1415	JT	EET ALB	03/07/24 10:52
Total/NA	Analysis	300.0		20	1436	JT	EET ALB	03/07/24 12:44

Client Sample ID: FP-2
Lab Sample ID: 885-647-3
Date Collected: 03/06/24 09:25
Matrix: Solid
Date Received: 03/07/24 07:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1414	JP	EET ALB	03/07/24 10:41
Total/NA	Analysis	8015D		1	1433	JP	EET ALB	03/07/24 12:23
Total/NA	Prep	5035			1414	JP	EET ALB	03/07/24 10:41
Total/NA	Analysis	8021B		1	1434	JP	EET ALB	03/07/24 12:23
Total/NA	Prep	SHAKE			1402	JU	EET ALB	03/07/24 09:02
Total/NA	Analysis	8015D		1	1425	PD	EET ALB	03/07/24 11:42
Total/NA	Prep	300_Prep			1415	JT	EET ALB	03/07/24 10:52
Total/NA	Analysis	300.0		20	1436	JT	EET ALB	03/07/24 12:59

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Ensolum Aztec Job ID: 885-647-1
Project/Site: Ensoum Aztec / Enterprise

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

Method Summary

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Method	Method Description	Protocol	Laboratory
8015D	Gasoline Range Organics (GRO) (GC)	SW846	EET ALB
8021B	Volatile Organic Compounds (GC)	SW846	EET ALB
8015D	Diesel Range Organics (DRO) (GC)	SW846	EET ALB
300.0	Anions, Ion Chromatography	EPA	EET ALB
300_Prep	Anions, Ion Chromatography, 10% Wt/Vol	EPA	EET ALB
5035	Closed System Purge and Trap	SW846	EET ALB
SHAKE	Preparation, Shake Jar	TestAmerica SOP	EET ALB

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Sample Summary

Client: Ensolum Aztec
Project/Site: Ensoum Aztec / Enterprise

Job ID: 885-647-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
885-647-1	S-6	Solid	03/06/24 09:05	03/07/24 07:15
885-647-2	S-7	Solid	03/06/24 09:15	03/07/24 07:15
885-647-3	FP-2	Solid	03/06/24 09:25	03/07/24 07:15

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 Same Day

Project Name: Hart CS #1

Project #: 05A1226310

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No mordy

# of Coolers: 1 cmc 3/7/24

Cooler Temp (including CF): 2.6-0=2.6 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE / TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl), ~~F, Br, NO3, NO2, PO4, SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)						
3/6/24	9:05	S	S-6	1 4oz jar	Cool		X	X					X									
3/6/24	9:15	S	S-7	↓	↓		X	X					X									
3/6/24	9:25	S	FP-2	↓	↓		X	X					X									

885-647 COC

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/6/24	1052	[signature]	Christ Walker		3/6/24	1052
3/6/24	1730	Christ Walker	cmc	cour	3/7/24	0715

Remarks: PM Tom Long
Pay key: RB21200
Non AFE # N72412

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.

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3/7/2024

Login Sample Receipt Checklist

Client: Ensolum Aztec Job Number: 885-647-1

Login Number: 647 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Cason, Cheyenne

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 4/2/2024 5:17:34 PM

JOB DESCRIPTION

Hart CS #1

JOB NUMBER

885-1267-1

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
4/2/2024 5:17:34 PM

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

Client: Ensolum
Project/Site: Hart CS #1

Laboratory Job ID: 885-1267-1

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1267-1

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low 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
Project: Hart CS #1

Job ID: 885-1267-1

Job ID: 885-1267-1 Eurofins Albuquerque

Job Narrative
885-1267-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 3/15/2024 7:22 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 2.9°C.

Gasoline Range Organics
Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: GS-1 (885-1267-1). 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
Method 8015D_DRO: The following sample required a dilution due to the nature of the sample matrix: GS-1 (885-1267-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8015D_DRO: Due to the high concentration of Diesel Range Organics [C10-C28] and Motor Oil Range Organics [C28-C40], the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 885-1762 and analytical batch 885-1793 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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: Hart CS #1

Job ID: 885-1267-1

Client Sample ID: GS-1
Date Collected: 03/14/24 10:20
Date Received: 03/15/24 07:22

Lab Sample ID: 885-1267-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**2500**		180		mg/Kg		03/15/24 09:33	03/15/24 10:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*507*	*S1+*	*15 - 244*	*03/15/24 09:33*	*03/15/24 10:41*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.90		mg/Kg		03/15/24 09:33	03/15/24 10:41	50
Ethylbenzene	**4.5**		1.8		mg/Kg		03/15/24 09:33	03/15/24 10:41	50
Toluene	**4.4**		1.8		mg/Kg		03/15/24 09:33	03/15/24 10:41	50
Xylenes, Total	**220**		3.6		mg/Kg		03/15/24 09:33	03/15/24 10:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*39 - 146*	*03/15/24 09:33*	*03/15/24 10:41*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**6200**		470		mg/Kg		03/15/24 09:27	03/15/24 11:39	50
Motor Oil Range Organics [C28-C40]	**33000**		2300		mg/Kg		03/15/24 09:27	03/15/24 11:39	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*03/15/24 09:27*	*03/15/24 11:39*	*50*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		61		mg/Kg		03/15/24 11:40	03/15/24 13:31	20

QC Sample Results

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1267-1

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

Lab Sample ID: MB 885-1764/1-A
Matrix: Solid
Analysis Batch: 1803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1764

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/15/24 09:33	03/15/24 10:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*15 - 244*	*03/15/24 09:33*	*03/15/24 10:17*	*1*

Lab Sample ID: LCS 885-1764/2-A
Matrix: Solid
Analysis Batch: 1803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1764

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	23.6		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*201*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-1764/1-A
Matrix: Solid
Analysis Batch: 1804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1764

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/15/24 09:33	03/15/24 10:17	1
Ethylbenzene	ND		0.050		mg/Kg		03/15/24 09:33	03/15/24 10:17	1
Toluene	ND		0.050		mg/Kg		03/15/24 09:33	03/15/24 10:17	1
Xylenes, Total	ND		0.10		mg/Kg		03/15/24 09:33	03/15/24 10:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*39 - 146*	*03/15/24 09:33*	*03/15/24 10:17*	*1*

Lab Sample ID: LCS 885-1764/3-A
Matrix: Solid
Analysis Batch: 1804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1764

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.793		mg/Kg		79	70 - 130		
Ethylbenzene			1.00	0.850		mg/Kg		85	70 - 130		
o-Xylene			1.00	0.838		mg/Kg		84	70 - 130		
Toluene			1.00	0.831		mg/Kg		83	70 - 130		
Xylenes, Total			3.00	2.55		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*

QC Sample Results

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1267-1

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

Lab Sample ID: MB 885-1762/1-A
Matrix: Solid
Analysis Batch: 1793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1762

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		03/15/24 09:27	03/15/24 11:18	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		03/15/24 09:27	03/15/24 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*03/15/24 09:27*	*03/15/24 11:18*	*1*

Lab Sample ID: LCS 885-1762/2-A
Matrix: Solid
Analysis Batch: 1793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1762

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	46.5		mg/Kg		93	62 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*81*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-1780/1-A
Matrix: Solid
Analysis Batch: 1813

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1780

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		03/15/24 11:40	03/15/24 12:46	1

Lab Sample ID: LCS 885-1780/2-A
Matrix: Solid
Analysis Batch: 1813

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1780

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.2		mg/Kg		94	90 - 110		

QC Association Summary

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1267-1

GC VOA

Prep Batch: 1764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	5035	
MB 885-1764/1-A	Method Blank	Total/NA	Solid	5035	
LCS 885-1764/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-1764/3-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 1803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	8015D	1764
MB 885-1764/1-A	Method Blank	Total/NA	Solid	8015D	1764
LCS 885-1764/2-A	Lab Control Sample	Total/NA	Solid	8015D	1764

Analysis Batch: 1804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	8021B	1764
MB 885-1764/1-A	Method Blank	Total/NA	Solid	8021B	1764
LCS 885-1764/3-A	Lab Control Sample	Total/NA	Solid	8021B	1764

GC Semi VOA

Prep Batch: 1762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	SHAKE	
MB 885-1762/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-1762/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 1793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	8015D	1762
MB 885-1762/1-A	Method Blank	Total/NA	Solid	8015D	1762
LCS 885-1762/2-A	Lab Control Sample	Total/NA	Solid	8015D	1762

HPLC/IC

Prep Batch: 1780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	300_Prep	
MB 885-1780/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-1780/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 1813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1267-1	GS-1	Total/NA	Solid	300.0	1780
MB 885-1780/1-A	Method Blank	Total/NA	Solid	300.0	1780
LCS 885-1780/2-A	Lab Control Sample	Total/NA	Solid	300.0	1780

Lab Chronicle

Client: Ensolum
Job ID: 885-1267-1
Project/Site: Hart CS #1

Client Sample ID: GS-1
Date Collected: 03/14/24 10:20
Date Received: 03/15/24 07:22

Lab Sample ID: 885-1267-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8015D		50	1803	JP	EET ALB	03/15/24 10:41
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8021B		50	1804	JP	EET ALB	03/15/24 10:41
Total/NA	Prep	SHAKE			1762	JU	EET ALB	03/15/24 09:27
Total/NA	Analysis	8015D		50	1793	PD	EET ALB	03/15/24 11:39
Total/NA	Prep	300_Prep			1780	JT	EET ALB	03/15/24 11:40
Total/NA	Analysis	300.0		20	1813	MA	EET ALB	03/15/24 13:31

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Ensolum
Job ID: 885-1267-1
Project/Site: Hart CS #1

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

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: Hart CS #1

Project #: SEE NOTES 05A1226310

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.0 - 0.1 = 2.9 (°C)

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

885-1267 COC

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)
3/14/24	10:30	S	GS-1	1402 jar	Cool	1	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/14/24	1432				3/14/24	1432
3/14/24	1734			courier	3/15/24	7:22

Remarks: PM Tom Long
Pay Key: RB21200
NonAFE# NT2412
Same Day

Login Sample Receipt Checklist

Client: Ensolum Job Number: 885-1267-1

Login Number: 1267 **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").	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/10/2024 11:39:19 AM Revision 1

JOB DESCRIPTION

Hart CS #1

JOB NUMBER

885-1271-1

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
4/10/2024 11:39:19 AM
Revision 1

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

Client: Ensolum
Project/Site: Hart CS #1

Laboratory Job ID: 885-1271-1

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

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: Hart CS #1

Job ID: 885-1271-1

Job ID: 885-1271-1 Eurofins Albuquerque

Job Narrative
885-1271-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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.

Revision
The report being provided is a revision of the original report sent on 4/3/2024. The report (revision 1) is being revised due to: Client updated their sample ID's.

Receipt
The samples were received on 3/15/2024 7:22 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 2.9°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
Method 8015D_DRO: Due to the high concentration of Diesel Range Organics [C10-C28] and Motor Oil Range Organics [C28-C40], the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 885-1762 and analytical batch 885-1793 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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: Hart CS #1

Job ID: 885-1271-1

Client Sample ID: HA-1 (7.5-8')

Date Collected: 03/14/24 10:05
Date Received: 03/15/24 07:22

Lab Sample ID: 885-1271-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**4.7**		3.2		mg/Kg		03/15/24 09:33	03/15/24 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*15 - 244*	*03/15/24 09:33*	*03/15/24 12:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.021**		0.016		mg/Kg		03/15/24 09:33	03/15/24 12:23	1
Ethylbenzene	ND		0.032		mg/Kg		03/15/24 09:33	03/15/24 12:23	1
Toluene	**0.079**		0.032		mg/Kg		03/15/24 09:33	03/15/24 12:23	1
Xylenes, Total	**0.23**		0.063		mg/Kg		03/15/24 09:33	03/15/24 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*39 - 146*	*03/15/24 09:33*	*03/15/24 12:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.9		mg/Kg		03/15/24 09:27	03/15/24 12:19	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		03/15/24 09:27	03/15/24 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*03/15/24 09:27*	*03/15/24 12:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		03/15/24 11:40	03/15/24 13:46	20

Client Sample Results

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

Client Sample ID: HA-1 (8-8.5')
Date Collected: 03/14/24 10:15
Date Received: 03/15/24 07:22

Lab Sample ID: 885-1271-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**10**		3.2		mg/Kg		03/15/24 09:33	03/15/24 11:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*15 - 244*	*03/15/24 09:33*	*03/15/24 11:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.026**		0.016		mg/Kg		03/15/24 09:33	03/15/24 11:28	1
Ethylbenzene	ND		0.032		mg/Kg		03/15/24 09:33	03/15/24 11:28	1
Toluene	**0.074**		0.032		mg/Kg		03/15/24 09:33	03/15/24 11:28	1
Xylenes, Total	**0.32**		0.063		mg/Kg		03/15/24 09:33	03/15/24 11:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*39 - 146*	*03/15/24 09:33*	*03/15/24 11:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.0		mg/Kg		03/15/24 09:27	03/15/24 12:30	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		03/15/24 09:27	03/15/24 12:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*03/15/24 09:27*	*03/15/24 12:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		03/15/24 11:40	03/15/24 14:01	20

Client Sample Results

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

Client Sample ID: HA-1 (8.5-9')
Date Collected: 03/14/24 10:25
Date Received: 03/15/24 07:22

Lab Sample ID: 885-1271-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		3.5		mg/Kg		03/15/24 09:33	03/15/24 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*03/15/24 09:33*	*03/15/24 11:51*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.018		mg/Kg		03/15/24 09:33	03/15/24 11:51	1
Ethylbenzene	ND		0.035		mg/Kg		03/15/24 09:33	03/15/24 11:51	1
Toluene	ND		0.035		mg/Kg		03/15/24 09:33	03/15/24 11:51	1
Xylenes, Total	ND		0.071		mg/Kg		03/15/24 09:33	03/15/24 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*39 - 146*	*03/15/24 09:33*	*03/15/24 11:51*	*1*

Method: SW846 8015D - 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		03/15/24 09:27	03/15/24 12:40	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/15/24 09:27	03/15/24 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*	*03/15/24 09:27*	*03/15/24 12:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		59		mg/Kg		03/15/24 11:40	03/15/24 14:16	20

QC Sample Results

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

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

Lab Sample ID: MB 885-1764/1-A
Matrix: Solid
Analysis Batch: 1803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1764

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/15/24 09:33	03/15/24 10:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*15 - 244*	*03/15/24 09:33*	*03/15/24 10:17*	*1*

Lab Sample ID: LCS 885-1764/2-A
Matrix: Solid
Analysis Batch: 1803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1764

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	23.6		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*201*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-1764/1-A
Matrix: Solid
Analysis Batch: 1804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1764

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/15/24 09:33	03/15/24 10:17	1
Ethylbenzene	ND		0.050		mg/Kg		03/15/24 09:33	03/15/24 10:17	1
Toluene	ND		0.050		mg/Kg		03/15/24 09:33	03/15/24 10:17	1
Xylenes, Total	ND		0.10		mg/Kg		03/15/24 09:33	03/15/24 10:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*39 - 146*	*03/15/24 09:33*	*03/15/24 10:17*	*1*

Lab Sample ID: LCS 885-1764/3-A
Matrix: Solid
Analysis Batch: 1804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1764

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.793		mg/Kg		79	70 - 130		
Ethylbenzene			1.00	0.850		mg/Kg		85	70 - 130		
Toluene			1.00	0.831		mg/Kg		83	70 - 130		
Xylenes, Total			3.00	2.55		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*

QC Sample Results

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

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

Lab Sample ID: MB 885-1762/1-A
Matrix: Solid
Analysis Batch: 1793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1762

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		03/15/24 09:27	03/15/24 11:18	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		03/15/24 09:27	03/15/24 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*03/15/24 09:27*	*03/15/24 11:18*	*1*

Lab Sample ID: LCS 885-1762/2-A
Matrix: Solid
Analysis Batch: 1793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1762

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	46.5		mg/Kg		93	62 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*81*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-1780/1-A
Matrix: Solid
Analysis Batch: 1813

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1780

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		03/15/24 11:40	03/15/24 12:46	1

Lab Sample ID: LCS 885-1780/2-A
Matrix: Solid
Analysis Batch: 1813

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1780

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.2		mg/Kg		94	90 - 110		

QC Association Summary

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

GC VOA

Prep Batch: 1764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	5035	
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	5035	
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	5035	
MB 885-1764/1-A	Method Blank	Total/NA	Solid	5035	
LCS 885-1764/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-1764/3-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 1803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	8015D	1764
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	8015D	1764
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	8015D	1764
MB 885-1764/1-A	Method Blank	Total/NA	Solid	8015D	1764
LCS 885-1764/2-A	Lab Control Sample	Total/NA	Solid	8015D	1764

Analysis Batch: 1804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	8021B	1764
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	8021B	1764
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	8021B	1764
MB 885-1764/1-A	Method Blank	Total/NA	Solid	8021B	1764
LCS 885-1764/3-A	Lab Control Sample	Total/NA	Solid	8021B	1764

GC Semi VOA

Prep Batch: 1762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	SHAKE	
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	SHAKE	
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	SHAKE	
MB 885-1762/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-1762/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 1793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	8015D	1762
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	8015D	1762
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	8015D	1762
MB 885-1762/1-A	Method Blank	Total/NA	Solid	8015D	1762
LCS 885-1762/2-A	Lab Control Sample	Total/NA	Solid	8015D	1762

HPLC/IC

Prep Batch: 1780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	300_Prep	
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	300_Prep	
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	300_Prep	
MB 885-1780/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-1780/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Ensolum
Project/Site: Hart CS #1

Job ID: 885-1271-1

HPLC/IC

Analysis Batch: 1813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1271-1	HA-1 (7.5-8')	Total/NA	Solid	300.0	1780
885-1271-2	HA-1 (8-8.5')	Total/NA	Solid	300.0	1780
885-1271-3	HA-1 (8.5-9')	Total/NA	Solid	300.0	1780
MB 885-1780/1-A	Method Blank	Total/NA	Solid	300.0	1780
LCS 885-1780/2-A	Lab Control Sample	Total/NA	Solid	300.0	1780

Lab Chronicle

Client: Ensolum
Job ID: 885-1271-1
Project/Site: Hart CS #1

Client Sample ID: HA-1 (7.5-8')
Lab Sample ID: 885-1271-1
Date Collected: 03/14/24 10:05
Matrix: Solid
Date Received: 03/15/24 07:22

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8015D		1	1803	JP	EET ALB	03/15/24 12:23
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8021B		1	1804	JP	EET ALB	03/15/24 12:23
Total/NA	Prep	SHAKE			1762	JU	EET ALB	03/15/24 09:27
Total/NA	Analysis	8015D		1	1793	PD	EET ALB	03/15/24 12:19
Total/NA	Prep	300_Prep			1780	JT	EET ALB	03/15/24 11:40
Total/NA	Analysis	300.0		20	1813	MA	EET ALB	03/15/24 13:46

Client Sample ID: HA-1 (8-8.5')
Lab Sample ID: 885-1271-2
Date Collected: 03/14/24 10:15
Matrix: Solid
Date Received: 03/15/24 07:22

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8015D		1	1803	JP	EET ALB	03/15/24 11:28
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8021B		1	1804	JP	EET ALB	03/15/24 11:28
Total/NA	Prep	SHAKE			1762	JU	EET ALB	03/15/24 09:27
Total/NA	Analysis	8015D		1	1793	PD	EET ALB	03/15/24 12:30
Total/NA	Prep	300_Prep			1780	JT	EET ALB	03/15/24 11:40
Total/NA	Analysis	300.0		20	1813	MA	EET ALB	03/15/24 14:01

Client Sample ID: HA-1 (8.5-9')
Lab Sample ID: 885-1271-3
Date Collected: 03/14/24 10:25
Matrix: Solid
Date Received: 03/15/24 07:22

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8015D		1	1803	JP	EET ALB	03/15/24 11:51
Total/NA	Prep	5035			1764	JP	EET ALB	03/15/24 09:33
Total/NA	Analysis	8021B		1	1804	JP	EET ALB	03/15/24 11:51
Total/NA	Prep	SHAKE			1762	JU	EET ALB	03/15/24 09:27
Total/NA	Analysis	8015D		1	1793	PD	EET ALB	03/15/24 12:40
Total/NA	Prep	300_Prep			1780	JT	EET ALB	03/15/24 11:40
Total/NA	Analysis	300.0		20	1813	MA	EET ALB	03/15/24 14:16

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Ensolum
Job ID: 885-1271-1
Project/Site: Hart CS #1

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: Same Day
☐ Standard ☒ Rush 100% Day

Project Name: Hart CS #1

Project #: SEE NOTES
05A1226310

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No 40gi

# of Coolers: 1

Cooler Temp(including CF): 3.0 - 0.1 = 2.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORA
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107
885-1271 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)
3/14/24	12:05	S	HA-1 (3.5-4')	4oz jar	Cool		X	X					X			
3/14/24	10:15	S	HA-1 (4-4.5')				X	X					X			
3/14/24	10:25	S	HA-1 (4.5-5')				X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/14/24	1432				3/14/24	1432
3/14/24	1734			courier	3/15/24	7:22

Remarks: PM Tom Long
Pay Key: RB21200
Non AFE # NM2412
Same Day

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

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% Day (Same Day)

Project Name: Hart CS #1

Project #: SEE NOTES
05A1226310

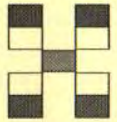
Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☐ Yes ☐ No

# of Coolers:

Cooler Temp(including CF): (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)
3/14/24	10:05	S	HA-1 (7.5-8)	4oz jar	Cool		X	X					X			
3/14/24	10:15	S	HA-1 (8-8.5)				X	X					X			
3/14/24	10:25	S	HA-1 (8.5-9)				X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/14/24	1432				3/14/24	1432
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: PM Tom Long
Pay Key: RB21200
Non AFE # NM2412

Same Day

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

Login Sample Receipt Checklist

Client: Ensolum Job Number: 885-1271-1

Login Number: 1271 **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").	N/A	

District I
1625 N. French Dr., Hobbs, NM 88240
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District II
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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 347174

QUESTIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2405737852**
Incident Name	**NAPP2405737852 HART CANYON #1 COMPRESSOR STATION @ 0**
Incident Type	**Oil Release**
Incident Status	**Deferral Request Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Hart Canyon #1 Compressor Station
Date Release Discovered	02/26/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil 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	Cause: Overflow - Tank, Pit, Etc. | Other (Specify) | Crude Oil | Released: 10 BBL | Recovered: 0 BBL | Lost: 10 BBL.
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	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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

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

I hereby agree and sign off to the above statement	Name: Thomas Long Title: Sr Field Environmental Scientist Email: tjlong@eprod.com Date: 03/01/2024

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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 51 and 75 (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 1 and 100 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (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 100 and 200 (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)	61
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	42000
GRO+DRO (EPA SW-846 Method 8015M)	2500
BTEX (EPA SW-846 Method 8021B or 8260B)	230
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	03/01/2024
On what date will (or did) the final sampling or liner inspection occur	03/14/2024
On what date will (or was) the remediation complete(d)	03/18/2024
What is the estimated surface area (in square feet) that will be reclaimed	530
What is the estimated volume (in cubic yards) that will be reclaimed	89
What is the estimated surface area (in square feet) that will be remediated	530
What is the estimated volume (in cubic yards) that will be remediated	89
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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: 05/23/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	Compressor skid and concrete foundations.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	20
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	2
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	ENTERPRISE HART CANYON NO.1 CS [fCS00000000109]
Enter the well API (30-) on which this deferral should be granted	*Not answered.*
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
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: 05/23/2024

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QUESTIONS (continued)

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**322532**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**03/14/2024**
What was the (estimated) number of samples that were to be gathered	**4**
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	No

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CONDITIONS

Action 347174

CONDITIONS

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	Action Number: 347174
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Deferral is approved. Remediation Due date will be left open until the site has been plugged and abandoned or a major facility deconstruction takes place.	6/7/2024