TIMBERWOLF ENVIRONMENTAL

1115 Welsh Ave., Suite B
College Station, Texas 77840
979.324.2139
www.teamtimberwolf.com

July 9, 2024

Mr. Nelson Velez, Environmental Specialist – Advanced
New Mexico Oil Conservation Division – District 3
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Status Report – 2nd Quarter 2024
Fifield 5 No. 1 (SE ¼, SW ¼, Sec. 5, T29N, R11W)
Hilcorp Energy Company
San Juan County, New Mexico
OCD Incident No. NVF1718155324

Dear Mr. Velez:

On behalf of Hilcorp Energy Company (Hilcorp), Timberwolf Environmental, LLC (Timberwolf) presents this report to document activities conducted during the 2nd quarter of 2024 (2Q24) at the Fifield 5 No. 1 (Site). The Site is a plugged well site in northeast San Juan County, New Mexico (Figures 1 through 3).

Environmental Setting and Site Geology

The area immediately surrounding the Site consists of sparse vegetative cover comprised primarily of scrub brush. Area topography consists of ridges divided by shallow valleys with intermittent streams that flow south into the San Juan River. The Site is situated east of an unnamed mesa, with an average Site elevation of approximately 5,786 feet (ft). The nearest waterway is an unnamed intermittent stream located approximately 1,350 ft west of the Site. The intermittent stream empties into the San Juan River, approximately 3.4 miles south of the Site.

According to the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), the Site soil consists of the Gypsiorthids-Badland-Stumble complex, with 5 to 30 percent slopes. The surface layer consists of sandy loam, underlain by lithic bedrock encountered between 16 to 20 inches below ground surface (bgs). Native salinity of the soil is very slightly saline to slightly saline (2.0 to 4.0 millimhos per centimeter (mmhos/cm)).

Site History

Release Event

The Fifield 5 No. 1 well has been plugged and all surface equipment removed from the Site; however, Hilcorp's Hali Meador #005R is located immediately west of the Site and remains active. Historically, the Site has consisted of a wellhead, line heater, and separator with the associated below-grade tank (BGT) for produced water, sales meter, and tank battery comprised of one above-ground storage tank (AST) and one BGT. On approximately 06/01/17, removal and closure of the BGT revealed historical contamination beneath the BGT. All surface equipment was removed, and the well was plugged and abandoned.

Investigation and Site Characterization

Initial assessment efforts were conducted by Rule Engineering, LLC (Rule), a subcontractor of ConocoPhillips Company (ConocoPhillips). Hilcorp acquired the property in 2017 and Rule conducted additional assessments in 2018. All findings by Rule Engineering are documented in Timberwolf's *Site Characterization and Remedial Action Plan*, dated February 28, 2019. The initial assessment identified the following constituents of concern (COCs): benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH).

On March 20, 2019, additional borings were installed at the Site to delineate petroleum hydrocarbon impacts vertically and horizontally in soil. All findings are documented in Timberwolf's *Site Characterization Report and Remedial Action Plan,* dated June 14, 2019.

Remediation – SVE System

In 2019, Hilcorp installed a soil vapor extraction (SVE) system to treat impacted soil related to historical pit tank releases. The SVE system is comprised of 18 SVE wells, 6 vent wells, and an SVE trailer (housing: control valves, flow and vacuum gauges, manifolds, fluid-air separator, automated controls, and a vacuum pump). The system remained inoperative while awaiting a power source.

In September 2021, Hilcorp installed a power source for the SVE system. The power source is a skid-mounted gas-fired motor with a pulley and belt drive apparatus to transfer power to a vacuum pump. The new vacuum pump was plumbed into the existing SVE trailer; the automation system was by-passed so that all legs remained open.

Work conducted at this Site is documented in the following reports:

- *Site Characterization and Remedial Action Plan*, dated 02/28/19
- *Site Characterization and Remedial Action Plan*, dated 07/14/19
- *Status Report – 1st Quarter 2020,* dated 09/20/21
- *Status Report – 2nd Quarter 2020,* dated 09/27/21
- *Status Report – 3rd Quarter 2020,* dated 09/27/21
- *Status Report – 4th Quarter 2020,* dated 09/27/21
- *Status Report – 1sr Quarter 2021,* dated 09/27/21

- *Status Report – 2nd Quarter 2021,* dated 09/27/21
- *Status Report – 3rd Quarter 2021,* dated 11/01/21
- *Status Report – 4th Quarter 2021,* dated 01/29/22
- *Status Report – 1st Quarter 2022,* dated 04/15/22
- *Status Report – 2nd Quarter 2022,* dated 07/14/22
- *Status Report – 3rd Quarter 2022,* dated 10/14/22
- *Status Report – 4th Quarter 2022,* dated 01/13/23
- *Status Report – 1st Quarter 2023,* dated 04/14/23
- *Status Report – 2nd Quarter 2023*, dated 07/13/23
- *Status Report – 3rd Quarter 2023,* dated 10/11/23
- Status Report – 4th Quarter 2023, dated 01/08/24
- *Status Report – 1st Quarter 2024*, dated 04/11/24.

SVE System Operations

The SVE system is equipped with four independent legs (i.e., Leg 1, Leg 2, Leg 3, and Leg 4). Leg 1 provides vacuum to the shallow wells and Legs 2, 3, and 4 provide vacuum extraction to the deep SVE wells. On 04/19/24, Hilcorp personnel installed an electrical power inverter to power the System's automation. The automation was activated on 04/19/24.

On 05/13/24, Timberwolf personnel programmed the automation panel to oscillate between Legs 1, 2, 3, and 4 every 6 hours for continuous 24-hr operations. The SVE wells were configured as shown in Figure 4. Programmed runtimes are presented in Tables 1 below.

Table 1. Programmed Runtimes and Leg Configurations

Leg	SVE Wells and Location	Scheduled Runtime
Leg 1	Shallow SVE Wells S1, S2, S3 and S4 Central and Western side of treatment zone	6 hours
Leg 2	Deep SVE Wells W1, W5, W6, and W7 Central and Western side of treatment zone	6 hours
Leg 3	Deep SVE Wells W8, W11, W12 and W13 Southern side of treatment zone	6 hours
Leg 4	Deep SVE Wells W3, W4, W9, W10, and W14 Eastern side of treatment zone	6 hours

SVE – soil vapor extraction
Shallow Well Depth – 7 to 10 ft.
Deep Well Depth – 25 to 35 ft.

Water and condensate are recovered with a moisture separator, which is fitted with a 1-inch PVC pipe to transfer fluids to an open-top tank fitted with bird netting. No water or condensate was recovered during 2Q24 operation and maintenance (O&M) events and sampling period. SVE system runtime for 2Q24 is documented in Table 2 below.

Table 2. System Runtime – 2Q24

Date	Hour Meter
03/22/24	2,512
04/05/2024	2,846
04/19/2024	3,182
05/13/2024	3,756
05/28/2024	4,119
06/06/2024	4,333
06/26/2024	4,813
Total Runtime	**2,301**

System runtime between the last 1Q24 reading (03/22/24) and the latest 2Q24 reading (06/26/24) was 2,301 hours. The total hours available during this period was 2,301 hours; therefore, yielding a runtime percentage (%) of 100.0 for 2Q24. Cygnet telemetry data also reveals continuous operation throughout the quarter. Photographs of relevant meter readings are documented in the attached Photographic Log.

During 2Q24, Hilcorp personnel conducted five (5) operational checks and Timberwolf personnel conducted one (1) operational check for a total of six (6) operational checks for the quarter. Additionally, three (3) coinciding maintenance events were conducted to perform the following activities:

- Installed a power inverter to power the automation system
- Replaced 11 vacuum hoses on the SVE system
- Program System automation

A field log of O&M events and maintenance performed is provided in the attached Table A-1.

Collection and Analysis of Quarterly Soil-Gas Sample

On 05/28/24, a composite soil-gas sample was collected from the SVE system's four Legs. A vacuum pump was connected to the SVE trailer sampling port, which is situated downstream of the 4-leg manifold and upstream of the air-water separator. The sampling port valve was opened once the pump was activated to purge air within the tubing between the sampling port and Tedlar® bag. After purging, the Tedlar® bag valve was opened to collect the air sample.

The soil-gas sample (i.e., SVE-1) was transported to Eurofins Albuquerque, formerly Hall Environmental and Analytical Laboratory (HEAL), in Albuquerque, New Mexico. Eurofins Albuquerque analyzed the sample for volatile organic compounds (VOCs) and subcontracted other gas analyses to Energy Laboratories in Billings, Montana. All sample transfers were conducted under proper chain-of-custody protocol.

The sample was analyzed for VOCs using EPA Method 8260B, Organic Compounds (GC) by GPA 2261-95, and Gasoline Range Organics by EPA Method 8015D. The laboratory report and chain-of-custody documents are attached.

Laboratory results of constituents that exceeded laboratory detection limits are presented in Table 3; analytical results of all constituents are presented in the attached Table A-2.

Table 3. Quarterly Soil-Gas Analysis – 05/28/24

Constituents	SVE-1
Volatile Organic Compounds (mg/m^3)	
Benzene	2.0
Toluene	17
Ethylbenzene	1.8
Isopropyl benzene	0.44
N-Propylbenzene	0.57
Total Xylenes	25
1,2,4-Trimethylbenzene	2.7
1,3,5-Trimethylbenzene	2.4
Gasoline Range (mg/m^3)	
TPH (GC-MS) Low Fraction (i.e., GRO)	750
Gases (Mol %)	
Oxygen	21.89
Carbon Dioxide	0.08

mg/m^3 – milligrams per cubic meter, equivalent to ug/L
TPH – total petroleum hydrocarbons
GC-MS – gas chromatography-mass spectrometry
GRO – gasoline range organics
Mol % – mole percent

Mass Removal

Timberwolf used the laboratory results from the soil-gas analysis (as reported in Table 3), flow rates, and runtimes to calculate constituent mass removal. Mass removal of GRO, BTEX, and associated recovered volumes for 2Q24 are presented in Table 4 below.

Table 4. Mass Removal and Associated Volume – 2Q24

Constituent	Mass Removal (kg)[1]	Total Mass Removed (lbs)[2]	Recovered Volume (bbl)
GRO	170.35	374.78	1.39
Benzene	0.45	1.00	0.00
Toluene	3.86	8.49	0.03
Ethylbenzene	0.41	0.90	0.00
Xylenes	5.68	12.49	0.05

[1] Calculation = minutes ran * CFM * Concentration (mg/m^3) * 1 M^3/35.3147 ft^3 *1 g/1000 mg * 1 kg/1000 g
[2] Calculation = [Mass Removal] * 2.2 lbs/kg
GRO = from TPH (GC/MS) Low Fraction (i.e., gasoline range organics)
kg – kilograms
lbs – pounds
bbl – barrel
Assumptions:
- API Gravity = 52

- Concentrations of VOCs in soil-gas vapors have remained static throughout the quarter
- Runtime calculations based on hour meter readings from 03/22/24 to 06/26/24 and Cygnet telemetry data.

Summary

System runtime during 2Q24 was 100% based on hour meter readings between 03/22/24 and 06/26/24; Cygnet telemetry data confirms continuous operation throughout the quarter.

During 2Q24, no water and/or condensate were recovered during O&M events. Additionally, mass removal calculations indicated the following recovery during the quarter:

- 1.39 bbl of GRO
- 1.00 lbs of benzene
- 8.49 lbs of toluene
- 0.90 lbs of ethylbenzene
- 12.49 lbs of xylene.

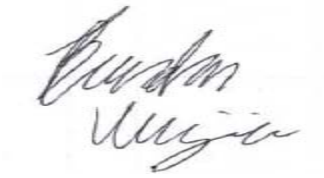
Further Actions – 3rd Quarter 2024

During 3Q24, the following activities are planned for the Site:

- Conduct bi-weekly Site O&M to ensure proper system function and drain any water/condensate accumulation in the moisture separator as needed
- Collect a quarterly soil-gas sample for laboratory analysis
- Prepare a 3Q24 status report.

If you have any questions regarding this report, please call us at (979) 324-2139.

Sincerely,
Timberwolf Environmental, LLC



Brandon Wiesinger
Staff Scientist

Jim Foster
President

Attachments: Figures
Attached Tables
Photographic Log
Laboratory Report and Chain-of-Custody Documents

cc: Mitch Killough, Hilcorp Energy Company

Figures

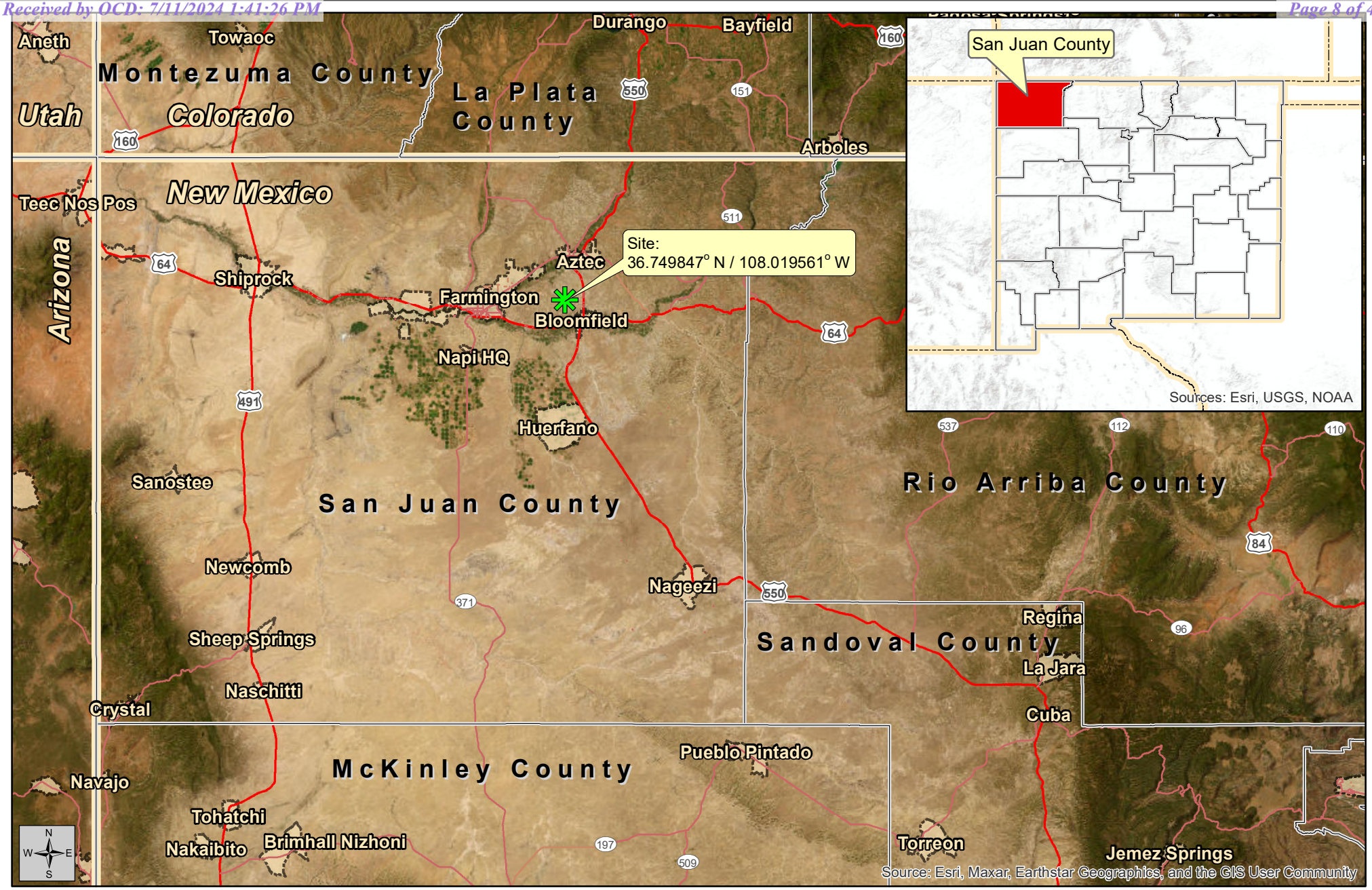


Figure 1 **Site Location Map**	**Status Report - 2nd Quarter 2024**	**March 26, 2024**

1:1,250,000

0 20 40 60 80 100 120 Miles

Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
Hilcorp Energy Company
San Juan County, New Mexico

TIMBERWOLF ENVIRONMENTAL

Created By:
Brett Berno
TE Project No.: HEC-190009

Datum: NAD83
Imagery Source: ESRI
Vector Source: ESRI and TE

Site

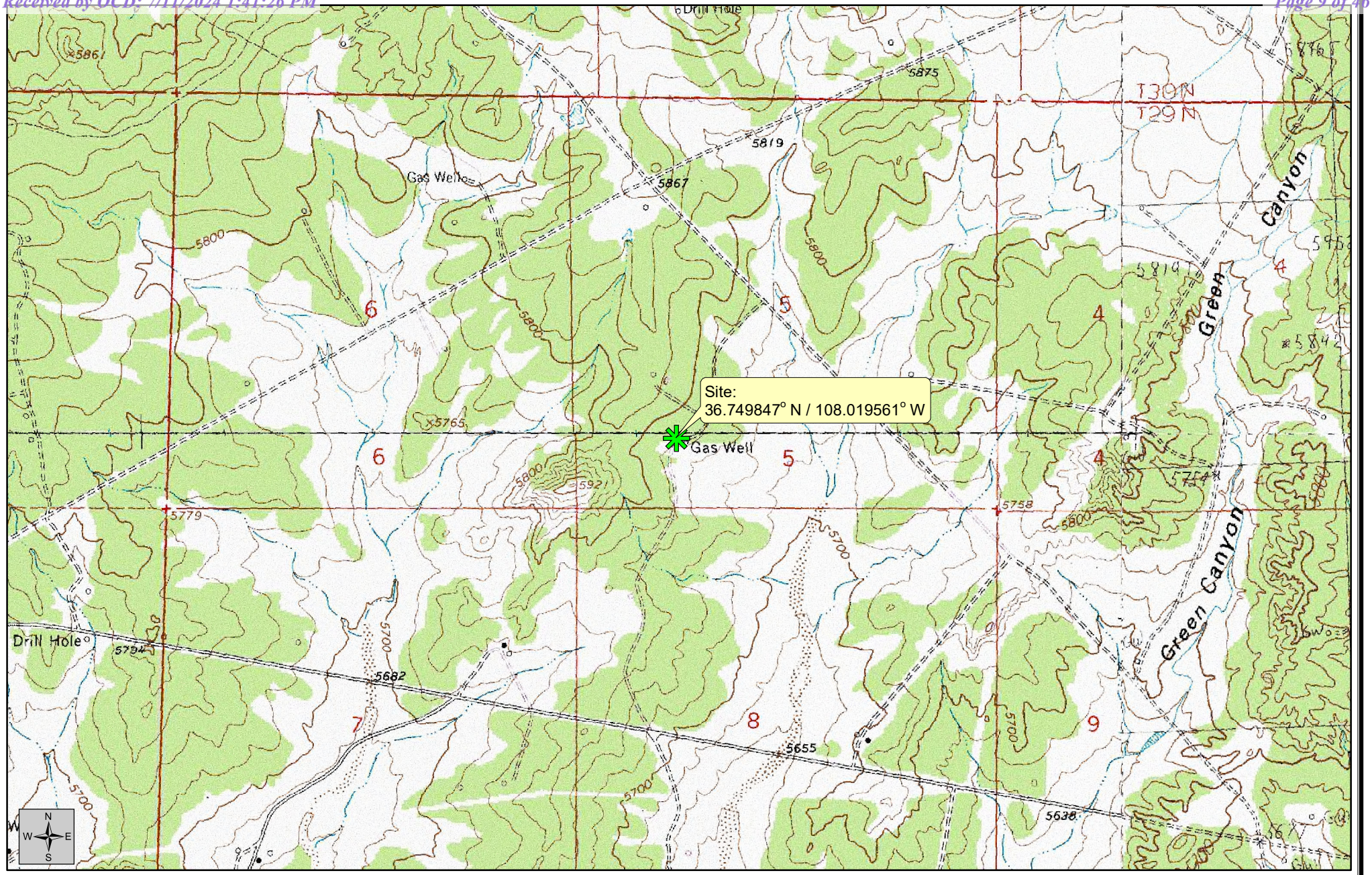


Figure 2 **Topographic Map**	**Status Report - 2nd Quarter 2024**	**March 26, 2024**
TIMBERWOLF ENVIRONMENTAL	1:24,000 0 0.5 1 1.5 2 Miles **Fifield 5 No. 1 (OCD Incident No. NVF1718155324)** **Hilcorp Energy Company** **San Juan County, New Mexico**	Site
Created By: Brett Berno TE Project No.: HEC-190009	Datum: NAD83 Imagery Source: USGS Quads: Aztec, Bloomfield, Flora Vista, Horn Canyon Vector Source: TE	

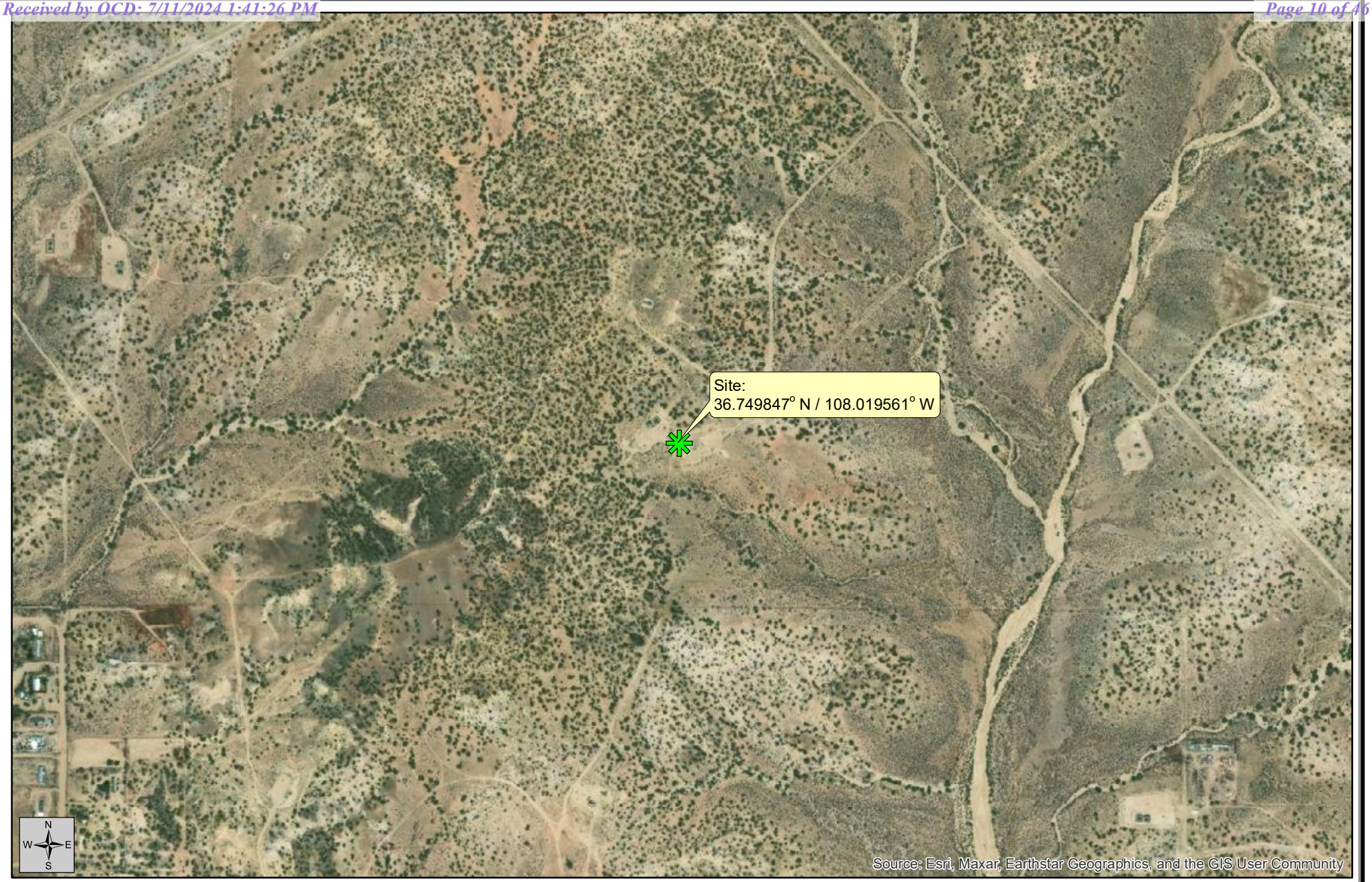


Figure 3 **Aerial Map**	**Status Report - 2nd Quarter 2024**	**March 26, 2024**

TIMBERWOLF ENVIRONMENTAL

1:10,000

0 0.25 0.5 0.75 1 Miles

Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
Hilcorp Energy Company
San Juan County, New Mexico

Created By:
Brett Berno
TE Project No.: HEC-190009

Datum: NAD83
Imagery Source: ESRI
Vector Source: TE

Site

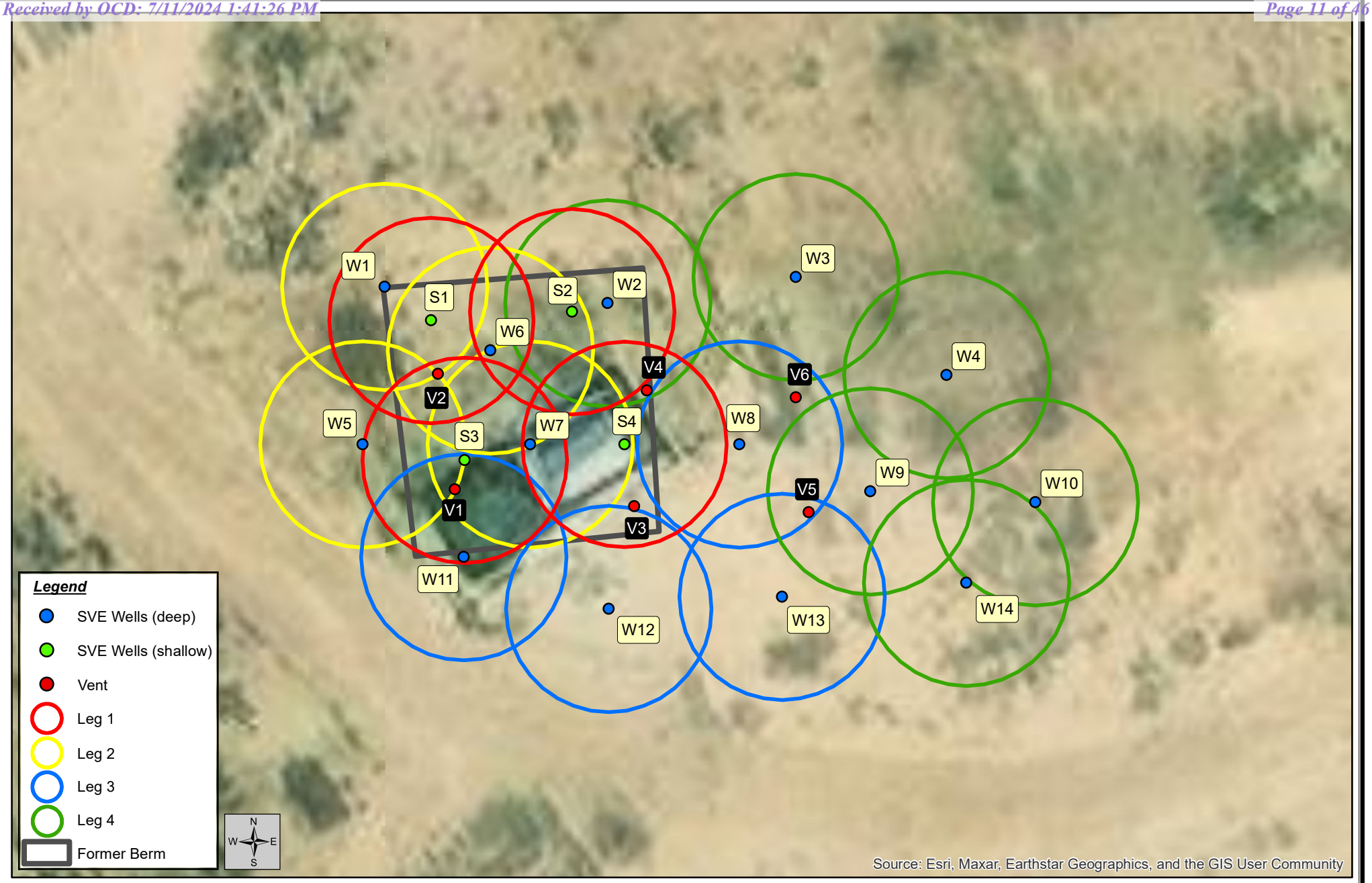


Figure 4 **SVE Well** **Location Map**	**Status Report - 2nd Quarter 2024**	**January 22, 2024**
TIMBERWOLF ENVIRONMENTAL Created By: Kevin Cole TE Project No.: HEC-190009	1:300 0 25 50 75 100 Feet **Fifield 5 No. 1 Release (OCD Incident No. NVF1718155324)** **Hilcorp Energy Company** **San Juan County, New Mexico**	Datum: NAD83 Imagery Source: ESRI Vector Source: TE

Attached Tables

Table A-1. Operation and Maintenance Events
Status Report - 2nd Quarter 2024
Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
San Juan County, New Mexico

Date	Hour Meter (hrs)	Water/Condenstate Recovered (gal)	Maintenance Performed
04/05/24	2,846	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks. • Hilcorp personnel noted that four broken vacuum hoses were replaced.
04/19/24	3,182	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks. • Hilcorp personnel noted that seven broken vacuum hoses were replaced, an inverter and control unit installed.
05/13/24	3,756	0	Jim Foster and Chris O'Brien with Timberwolf Environmental performed SVE system O&M checks.
05/28/24	4,119	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks. • Hilcorp personnel noted gauge 4 on leg 1 was not functional.
06/06/24	4,333	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.
06/26/24	4,813	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.

gal – gallons
hrs – hours
-- – not collected

Table A-2. Soil-Gas Analysis - 05/28/24
Status Report - 2nd Quarter 2024
Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
San Juan County, New Mexico

Constituents	SVE-1
Volatiles (µg/m^3)	
Acetone	< 5,000
Benzene	2,000
Bromodichloromethane	< 500
Bromoform	< 500
Bromomethane	< 1,500
Carbon disulfide	< 5,000
Carbon tetrachloride	< 500
Chlorobenzene	< 500
Chloroethane	< 1,000
Chloroform	< 500
Chloromethane	< 1,500
2-Chlorotoluene	< 500
Dibromochloromethane	< 500
1,2-Dibromoethane	< 500
1,2-Dichlorobenzene	< 500
1,3-Dichlorobenzene	< 500
1,4-Dichlorobenzene	< 500
1,2-Dichloroethane	< 500
1,1-Dichloroethane	< 500
1,1-Dichloroethene	< 500
cis-1,2-Dichloroethene (cis-1,2-DCE)	< 500
trans-1,2-Dichloroethene (trans-1,2-DCE)	< 500
1,2-Dichloropropane	< 500
cis-1,3-Dichloropropene	< 500
trans-1,3-Dichloropropene	< 500
Ethylbenzene	1,800
Trichlorofluoromethane	< 500
Dichlorodifluoromethane	< 500
Hexachloro-1,3-butadiene	< 500
Isopropylbenzene	440
Methylene Chloride	< 1,500
n-Propylbenzene	570
2-Butanone (MEK)	< 5,000
4-Methyl-2-pentanone (MIBK)	< 5,000
MTBE	< 500
Naphthalene	< 1,000

Table A-2. Soil-Gas Analysis - 05/28/24
Status Report - 2nd Quarter 2024
Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
San Juan County, New Mexico

Constituents	SVE-1
Styrene	< 500
1,1,2,2-Tetrachloroethane	< 1,000
Toluene	17,000
1,2,4-Trichlorobenzene	< 500
1,1,1-Trichloroethane	< 500
1,1,2-Trichloroethane	< 500
1,2,4-Trimethylbenzene	2,700
1,3,5-Trimethylbenzene	2,400
Vinyl chloride	< 500
Total Xylenes	25,000
Gasoline Range (µg/m^3)	
Gasoline Range Organics (GRO)	750,000
Gases (Mol %)	
Oxygen	21.89
Carbon Dioxide	0.08
Methane	< 0.01

µg/m^3 – micrograms per cubic meter
Mol % – mole percent

Photographic Log

TIMBERWOLF ENVIRONMENTAL

1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
www.teamtimberwolf.com

PHOTOGRAPHIC LOG

Project No.:	HEC-190009	**Client:**	Hilcorp Energy Company
Project Name:	Fifield 5 No. 1	**Site Location:**	San Juan County, New Mexico
Task Description:	Status Report – 2nd Quarter 2024	**Date:**	April – June, 2024

Photo No.: 1

Direction: N/A

Comments: View of hour meter on 04/05/24.

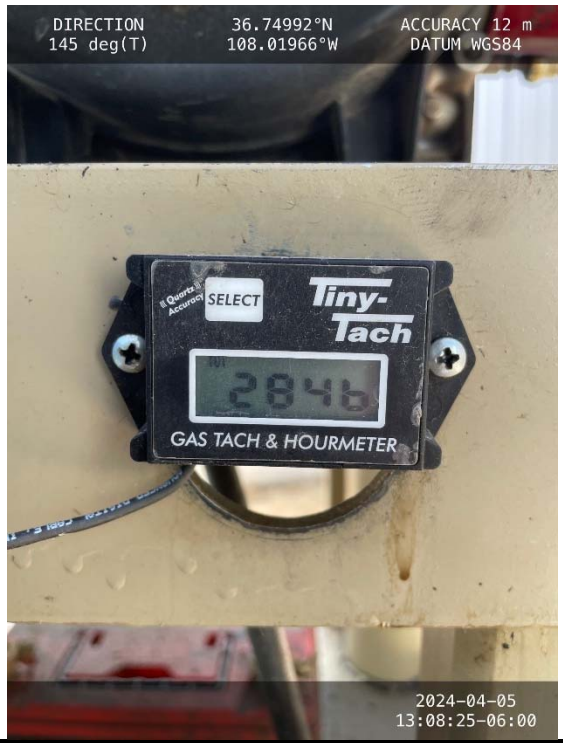
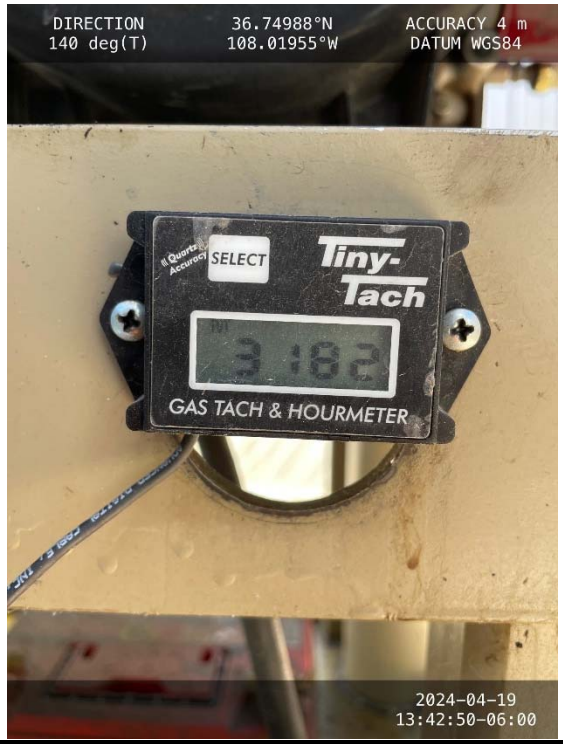


Photo No.: 2

Direction: N/A

Comments: View of hour meter on 04/19/24.



TIMBERWOLF ENVIRONMENTAL

1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
www.teamtimberwolf.com

PHOTOGRAPHIC LOG

Project No.:	HEC-190009	**Client:**	Hilcorp Energy Company
Project Name:	Fifield 5 No. 1	**Site Location:**	San Juan County, New Mexico
Task Description:	Status Report – 2nd Quarter 2024	**Date:**	April – June, 2024

Photo No.: 3

Direction: N/A

Comments: View of hour meter on 05/13/24.

Photo No.: 4

Direction: N/A

Comments: View of hour meter on 05/28/24.

TIMBERWOLF ENVIRONMENTAL

1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
www.teamtimberwolf.com

PHOTOGRAPHIC LOG

Project No.:	HEC-190009	**Client:**	Hilcorp Energy Company
Project Name:	Fifield 5 No. 1	**Site Location:**	San Juan County, New Mexico
Task Description:	Status Report – 2nd Quarter 2024	**Date:**	April – June, 2024

Photo No.: 5

Direction: N/A

Comments: View of hour meter on 06/06/24.

Photo No.: 6

Direction: N/A

Comments: View of hour meter on 06/26/24.

TIMBERWOLF ENVIRONMENTAL

1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
www.teamtimberwolf.com

PHOTOGRAPHIC LOG

Project No.:	HEC-190009	**Client:**	Hilcorp Energy Company
Project Name:	Fifield 5 No. 1	**Site Location:**	San Juan County, New Mexico
Task Description:	Status Report – 2nd Quarter 2024	**Date:**	April – June, 2024

Photo No.: 7

Direction: N/A

Comments: View of installed power inverter.

Photo No.: 8

Direction: N/A

Comments: View of installed Program System automation.

TIMBERWOLF ENVIRONMENTAL

1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
www.teamtimberwolf.com

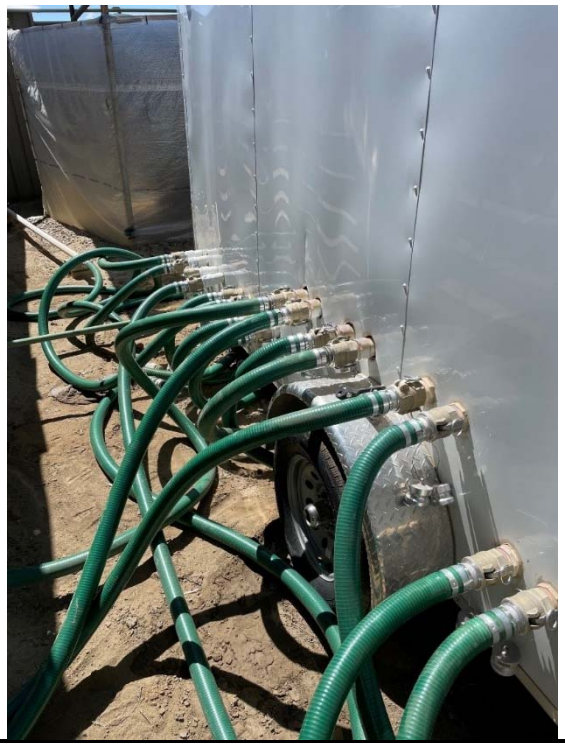
PHOTOGRAPHIC LOG

Project No.:	HEC-190009	**Client:**	Hilcorp Energy Company
Project Name:	Fifield 5 No. 1	**Site Location:**	San Juan County, New Mexico
Task Description:	Status Report – 2nd Quarter 2024	**Date:**	April – June, 2024

Photo No.:
9

Direction:
N/A

Comments:
View of replaced hoses.



Laboratory Report and Chain-of-Custody Documents

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mitch Killough
Hilcorp Energy
PO BOX 4700
Farmington, New Mexico 87499

Generated 6/10/2024 8:53:17 PM

JOB DESCRIPTION

Fifield 5 #1

JOB NUMBER

885-5279-1

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
6/10/2024 8:53:17 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Laboratory Job ID: 885-5279-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

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: Hilcorp Energy
Project: Fifield 5 #1

Job ID: 885-5279-1

Job ID: 885-5279-1 Eurofins Albuquerque

Job Narrative
885-5279-1

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 5/30/2024 6:55 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 16.3°C.

Subcontract Work
Method Fixed Gases: This method was subcontracted to Energy Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

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

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

Client Sample Results

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Client Sample ID: SVE-1

Lab Sample ID: 885-5279-1

Date Collected: 05/28/24 15:00
Matrix: Air
Date Received: 05/30/24 06:55
Sample Container: Tedlar Bag 1L

Method: SW846 8015M/D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**750**		10		ug/L			06/07/24 13:22	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*52 - 172*		*06/07/24 13:22*	*2*

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.20		ug/L			06/07/24 13:22	2
1,1,1-Trichloroethane	ND		0.20		ug/L			06/07/24 13:22	2
1,1,2,2-Tetrachloroethane	ND		0.40		ug/L			06/07/24 13:22	2
1,1,2-Trichloroethane	ND		0.20		ug/L			06/07/24 13:22	2
1,1-Dichloroethane	ND		0.20		ug/L			06/07/24 13:22	2
1,1-Dichloroethene	ND		0.20		ug/L			06/07/24 13:22	2
1,1-Dichloropropene	ND		0.20		ug/L			06/07/24 13:22	2
1,2,3-Trichlorobenzene	ND		0.20		ug/L			06/07/24 13:22	2
1,2,3-Trichloropropane	ND		0.40		ug/L			06/07/24 13:22	2
1,2,4-Trichlorobenzene	ND		0.20		ug/L			06/07/24 13:22	2
1,2,4-Trimethylbenzene	**2.7**		0.20		ug/L			06/07/24 13:22	2
1,2-Dibromo-3-Chloropropane	ND		0.40		ug/L			06/07/24 13:22	2
1,2-Dibromoethane (EDB)	ND		0.20		ug/L			06/07/24 13:22	2
1,2-Dichlorobenzene	ND		0.20		ug/L			06/07/24 13:22	2
1,2-Dichloroethane (EDC)	ND		0.20		ug/L			06/07/24 13:22	2
1,2-Dichloropropane	ND		0.20		ug/L			06/07/24 13:22	2
1,3,5-Trimethylbenzene	**2.4**		0.20		ug/L			06/07/24 13:22	2
1,3-Dichlorobenzene	ND		0.20		ug/L			06/07/24 13:22	2
1,3-Dichloropropane	ND		0.20		ug/L			06/07/24 13:22	2
1,4-Dichlorobenzene	ND		0.20		ug/L			06/07/24 13:22	2
1-Methylnaphthalene	ND		0.80		ug/L			06/07/24 13:22	2
2,2-Dichloropropane	ND		0.40		ug/L			06/07/24 13:22	2
2-Butanone	ND		2.0		ug/L			06/07/24 13:22	2
2-Chlorotoluene	ND		0.20		ug/L			06/07/24 13:22	2
2-Hexanone	ND		2.0		ug/L			06/07/24 13:22	2
2-Methylnaphthalene	ND		0.80		ug/L			06/07/24 13:22	2
4-Chlorotoluene	ND		0.20		ug/L			06/07/24 13:22	2
4-Isopropyltoluene	ND		0.20		ug/L			06/07/24 13:22	2
4-Methyl-2-pentanone	ND		2.0		ug/L			06/07/24 13:22	2
Acetone	ND		2.0		ug/L			06/07/24 13:22	2
Benzene	**2.0**		0.20		ug/L			06/07/24 13:22	2
Bromobenzene	ND		0.20		ug/L			06/07/24 13:22	2
Bromodichloromethane	ND		0.20		ug/L			06/07/24 13:22	2
Dibromochloromethane	ND		0.20		ug/L			06/07/24 13:22	2
Bromoform	ND		0.20		ug/L			06/07/24 13:22	2
Bromomethane	ND		0.60		ug/L			06/07/24 13:22	2
Carbon disulfide	ND		2.0		ug/L			06/07/24 13:22	2
Carbon tetrachloride	ND		0.20		ug/L			06/07/24 13:22	2
Chlorobenzene	ND		0.20		ug/L			06/07/24 13:22	2
Chloroethane	ND		0.40		ug/L			06/07/24 13:22	2
Chloroform	ND		0.20		ug/L			06/07/24 13:22	2

Client Sample Results

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Client Sample ID: SVE-1

Lab Sample ID: 885-5279-1

Date Collected: 05/28/24 15:00
Matrix: Air
Date Received: 05/30/24 06:55
Sample Container: Tedlar Bag 1L

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		0.60		ug/L			06/07/24 13:22	2
cis-1,2-Dichloroethene	ND		0.20		ug/L			06/07/24 13:22	2
cis-1,3-Dichloropropene	ND		0.20		ug/L			06/07/24 13:22	2
Dibromomethane	ND		0.20		ug/L			06/07/24 13:22	2
Dichlorodifluoromethane	ND		0.20		ug/L			06/07/24 13:22	2
Ethylbenzene	**1.8**		0.20		ug/L			06/07/24 13:22	2
Hexachlorobutadiene	ND		0.20		ug/L			06/07/24 13:22	2
Isopropylbenzene	**0.44**		0.20		ug/L			06/07/24 13:22	2
Methyl-tert-butyl Ether (MTBE)	ND		0.20		ug/L			06/07/24 13:22	2
Methylene Chloride	ND		0.60		ug/L			06/07/24 13:22	2
n-Butylbenzene	ND		0.60		ug/L			06/07/24 13:22	2
N-Propylbenzene	**0.57**		0.20		ug/L			06/07/24 13:22	2
Naphthalene	ND		0.40		ug/L			06/07/24 13:22	2
sec-Butylbenzene	ND		0.20		ug/L			06/07/24 13:22	2
Styrene	ND		0.20		ug/L			06/07/24 13:22	2
tert-Butylbenzene	ND		0.20		ug/L			06/07/24 13:22	2
Tetrachloroethene (PCE)	ND		0.20		ug/L			06/07/24 13:22	2
Toluene	**17**		0.20		ug/L			06/07/24 13:22	2
trans-1,2-Dichloroethene	ND		0.20		ug/L			06/07/24 13:22	2
trans-1,3-Dichloropropene	ND		0.20		ug/L			06/07/24 13:22	2
Trichloroethene (TCE)	ND		0.20		ug/L			06/07/24 13:22	2
Trichlorofluoromethane	ND		0.20		ug/L			06/07/24 13:22	2
Vinyl chloride	ND		0.20		ug/L			06/07/24 13:22	2
Xylenes, Total	**25**		0.30		ug/L			06/07/24 13:22	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*		*06/07/24 13:22*	*2*
Toluene-d8 (Surr)	*118*		*70 - 130*		*06/07/24 13:22*	*2*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*		*06/07/24 13:22*	*2*
Dibromofluoromethane (Surr)	*84*		*70 - 130*		*06/07/24 13:22*	*2*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Method: 8015M/D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Lab Sample ID: MB 885-6414/3
Matrix: Air
Analysis Batch: 6414

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		50		ug/L			06/07/24 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*52 - 172*		*06/07/24 12:08*	*1*

Lab Sample ID: LCS 885-6414/2
Matrix: Air
Analysis Batch: 6414

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			500	509		ug/L		102			

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*52 - 172*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 885-6408/3
Matrix: Air
Analysis Batch: 6408

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10		ug/L			06/07/24 12:08	1
1,1,1-Trichloroethane	ND		0.10		ug/L			06/07/24 12:08	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			06/07/24 12:08	1
1,1,2-Trichloroethane	ND		0.10		ug/L			06/07/24 12:08	1
1,1-Dichloroethane	ND		0.10		ug/L			06/07/24 12:08	1
1,1-Dichloroethene	ND		0.10		ug/L			06/07/24 12:08	1
1,1-Dichloropropene	ND		0.10		ug/L			06/07/24 12:08	1
1,2,3-Trichlorobenzene	ND		0.10		ug/L			06/07/24 12:08	1
1,2,3-Trichloropropane	ND		0.20		ug/L			06/07/24 12:08	1
1,2,4-Trichlorobenzene	ND		0.10		ug/L			06/07/24 12:08	1
1,2,4-Trimethylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
1,2-Dibromo-3-Chloropropane	ND		0.20		ug/L			06/07/24 12:08	1
1,2-Dibromoethane (EDB)	ND		0.10		ug/L			06/07/24 12:08	1
1,2-Dichlorobenzene	ND		0.10		ug/L			06/07/24 12:08	1
1,2-Dichloroethane (EDC)	ND		0.10		ug/L			06/07/24 12:08	1
1,2-Dichloropropane	ND		0.10		ug/L			06/07/24 12:08	1
1,3,5-Trimethylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
1,3-Dichlorobenzene	ND		0.10		ug/L			06/07/24 12:08	1
1,3-Dichloropropane	ND		0.10		ug/L			06/07/24 12:08	1
1,4-Dichlorobenzene	ND		0.10		ug/L			06/07/24 12:08	1
1-Methylnaphthalene	ND		0.40		ug/L			06/07/24 12:08	1
2,2-Dichloropropane	ND		0.20		ug/L			06/07/24 12:08	1
2-Butanone	ND		1.0		ug/L			06/07/24 12:08	1
2-Chlorotoluene	ND		0.10		ug/L			06/07/24 12:08	1
2-Hexanone	ND		1.0		ug/L			06/07/24 12:08	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 885-6408/3
Matrix: Air
Analysis Batch: 6408

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.40		ug/L			06/07/24 12:08	1
4-Chlorotoluene	ND		0.10		ug/L			06/07/24 12:08	1
4-Isopropyltoluene	ND		0.10		ug/L			06/07/24 12:08	1
4-Methyl-2-pentanone	ND		1.0		ug/L			06/07/24 12:08	1
Acetone	ND		1.0		ug/L			06/07/24 12:08	1
Benzene	ND		0.10		ug/L			06/07/24 12:08	1
Bromobenzene	ND		0.10		ug/L			06/07/24 12:08	1
Bromodichloromethane	ND		0.10		ug/L			06/07/24 12:08	1
Dibromochloromethane	ND		0.10		ug/L			06/07/24 12:08	1
Bromoform	ND		0.10		ug/L			06/07/24 12:08	1
Bromomethane	ND		0.30		ug/L			06/07/24 12:08	1
Carbon disulfide	ND		1.0		ug/L			06/07/24 12:08	1
Carbon tetrachloride	ND		0.10		ug/L			06/07/24 12:08	1
Chlorobenzene	ND		0.10		ug/L			06/07/24 12:08	1
Chloroethane	ND		0.20		ug/L			06/07/24 12:08	1
Chloroform	ND		0.10		ug/L			06/07/24 12:08	1
Chloromethane	ND		0.30		ug/L			06/07/24 12:08	1
cis-1,2-Dichloroethene	ND		0.10		ug/L			06/07/24 12:08	1
cis-1,3-Dichloropropene	ND		0.10		ug/L			06/07/24 12:08	1
Dibromomethane	ND		0.10		ug/L			06/07/24 12:08	1
Dichlorodifluoromethane	ND		0.10		ug/L			06/07/24 12:08	1
Ethylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
Hexachlorobutadiene	ND		0.10		ug/L			06/07/24 12:08	1
Isopropylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
Methyl-tert-butyl Ether (MTBE)	ND		0.10		ug/L			06/07/24 12:08	1
Methylene Chloride	ND		0.30		ug/L			06/07/24 12:08	1
n-Butylbenzene	ND		0.30		ug/L			06/07/24 12:08	1
N-Propylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
Naphthalene	ND		0.20		ug/L			06/07/24 12:08	1
sec-Butylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
Styrene	ND		0.10		ug/L			06/07/24 12:08	1
tert-Butylbenzene	ND		0.10		ug/L			06/07/24 12:08	1
Tetrachloroethene (PCE)	ND		0.10		ug/L			06/07/24 12:08	1
Toluene	ND		0.10		ug/L			06/07/24 12:08	1
trans-1,2-Dichloroethene	ND		0.10		ug/L			06/07/24 12:08	1
trans-1,3-Dichloropropene	ND		0.10		ug/L			06/07/24 12:08	1
Trichloroethene (TCE)	ND		0.10		ug/L			06/07/24 12:08	1
Trichlorofluoromethane	ND		0.10		ug/L			06/07/24 12:08	1
Vinyl chloride	ND		0.10		ug/L			06/07/24 12:08	1
Xylenes, Total	ND		0.15		ug/L			06/07/24 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*06/07/24 12:08*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*06/07/24 12:08*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*06/07/24 12:08*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*06/07/24 12:08*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 885-6408/2
Matrix: Air
Analysis Batch: 6408

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene			20.1	19.5		ug/L		97			
Benzene			20.1	20.2		ug/L		101			
Chlorobenzene			20.1	20.4		ug/L		102			
Toluene			20.2	20.4		ug/L		101			
Trichloroethene (TCE)			20.2	18.6		ug/L		92			

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
Dibromofluoromethane (Surr)	*89*		*70 - 130*

QC Association Summary

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

GC/MS VOA

Analysis Batch: 6408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5279-1	SVE-1	Total/NA	Air	8260B	
MB 885-6408/3	Method Blank	Total/NA	Air	8260B	
LCS 885-6408/2	Lab Control Sample	Total/NA	Air	8260B	

Analysis Batch: 6414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5279-1	SVE-1	Total/NA	Air	8015M/D	
MB 885-6414/3	Method Blank	Total/NA	Air	8015M/D	
LCS 885-6414/2	Lab Control Sample	Total/NA	Air	8015M/D	

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Client Sample ID: SVE-1

Date Collected: 05/28/24 15:00
Date Received: 05/30/24 06:55

Lab Sample ID: 885-5279-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015M/D		2	6414	RA	EET ALB	06/07/24 13:22
Total/NA	Analysis	8260B		2	6408	RA	EET ALB	06/07/24 13:22

Laboratory References:

= , 1120 South 27th Street, Billings, MT 59101, TEL (406)252-6325

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015M/D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Laboratory: Eurofins Albuquerque (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015M/D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Fifield 5 #1

Job ID: 885-5279-1

Laboratory: Eurofins Albuquerque (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 406.252.6325 • Casper, WY 307.235.0515
Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

ANALYTICAL SUMMARY REPORT

June 10, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24060076 Quote ID: B15626
Project Name: Fifield 5 #1, 88501698

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 6/3/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24060076-001	SVE-1 (885-5279-1)	05/28/24 15:00	06/03/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 406.252.6325 • Casper, WY 307.235.0515
Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Fifield 5 #1, 88501698
Lab ID: B24060076-001
Client Sample ID: SVE-1 (885-5279-1)

Report Date: 06/10/24
Collection Date: 05/28/24 15:00
DateReceived: 06/03/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.89	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Nitrogen	78.00	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Carbon Dioxide	0.08	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-95	06/05/24 10:32 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
GPM Total	0.013	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-95	06/05/24 10:32 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	06/05/24 10:32 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	06/05/24 10:32 / jrj
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	06/05/24 10:32 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	06/05/24 10:32 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	06/05/24 10:32 / jrj
Air, %	100.01			0.01		GPA 2261-95	06/05/24 10:32 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	06/05/24 10:32 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 406.252.6325 • Casper, WY 307.235.0515
Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24060076 **Report Date:** 06/10/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R422363
Lab ID: **B24060076-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240605A				06/05/24 11:22
Oxygen		21.9	Mol %	0.01				0.1	20	
Nitrogen		78.0	Mol %	0.01				0	20	
Carbon Dioxide		0.08	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.03	Mol %	0.01				0.0	20	
Lab ID: **LCS060524**	11	Laboratory Control Sample				Run: GCNGA-B_240605A				06/05/24 01:03
Oxygen		0.65	Mol %	0.01	130	70	130			
Nitrogen		6.08	Mol %	0.01	101	70	130			
Carbon Dioxide		1.00	Mol %	0.01	101	70	130			
Methane		74.8	Mol %	0.01	100	70	130			
Ethane		6.02	Mol %	0.01	100	70	130			
Propane		5.03	Mol %	0.01	102	70	130			
Isobutane		1.63	Mol %	0.01	81	70	130			
n-Butane		2.00	Mol %	0.01	100	70	130			
Isopentane		1.01	Mol %	0.01	101	70	130			
n-Pentane		1.01	Mol %	0.01	101	70	130			
Hexanes plus		0.79	Mol %	0.01	99	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 406.252.6325 • Casper, WY 307.235.0515
Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Work Order Receipt Checklist

Hall Environmental

B24060076

Login completed by: Crystal M. Jones
Date Received: 6/3/2024
Reviewed by: lleprowse
Received by: JFR
Reviewed Date: 6/10/2024
Carrier name: FedEx NDA

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	19.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque, NM 87109
Phone: 505-345-3975 Fax: 505-345-4107

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Freeman, Andy	Carrier Tracking No(s):	COC No: 885-811.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: andy.freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Energy Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon; State - New Mexico		Job #: 885-5279-1
Address: 1120 South 27th Street, ,	Due Date Requested: 6/11/2024	Analysis Requested		Preservation Codes: -
City: Billings	TAT Requested (days):			
State, Zip: MT, 59101				
Phone: 406-252-6325(Tel)	PO #:			
Email:	WO #:			
Project Name: Fifield 5 #1	Project #: 88501698			
Site:	SSOW#:			Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Fixed Gases)/ Fixed Gases	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SVE-1 (885-5279-1)	5/28/24	15:00 Mountain		Air			X	1	B24060076

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/30/24 13:59				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Jaelynn Roesler	Date/Time: 6/3/24 0905	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 04/02/2024

ICOC No:
885-811

Containers

Count	Container Type	Preservative
1	Tedlar Bag 1L	None

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclair@hilcorp.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Fifield 5 #1

Project #:

Project Manager: Mitch Killough

Sampler:

On Ice: ☐ Yes ☐ No

# of Coolers: 1 400

Cooler Temp (Including CF): 6.4-0.1=6.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABOR
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 871
Tel. 505-345-3975 Fax 505-345-4107

885-5279 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)	8015 TVPH	Fixed gas O_2 & CO_2
5-28	1500	air	SVE-1	2 Tedlar		1								✓			✓	✓

Remarks:

Date	Time:	Relinquished by:	Received by	Via.	Date	Time
5/29/24	1310					
5/29/24	1732			courier	5/30/24	6:55

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: Hilcorp Energy Job Number: 885-5279-1

Login Number: 5279 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	False	Thermal preservation not required.
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?	N/A	
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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 363389

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 363389
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record.	10/28/2024