



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

REVIEWED**By N Velez at 10:04 am, Oct 28, 2024**

1. Continue further actions as stated in report.
2. Submit next quarterly report by January 15, 2025.

October 7, 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 – 3rd 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 3rd quarter of 2024 (3Q24) 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)).



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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 bypassed 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 – 1st Quarter 2021*, dated 09/27/21



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- *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
- *Status Report – 2nd Quarter 2024*, dated 07/09/24

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. System automation was incorporated in April 2024; automation was activated on 04/19/24 and programmed 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 Table 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 Screen Interval – 7 to 10 ft.
Deep Well Screen Interval – 25 to 35 ft.

Water and condensate are recovered with a moisture separator, which is fitted with a 1-inch PVC pipe to transfer recovered fluids to an open-top tank fitted with bird netting. No water or condensate was recovered during 3Q24 operation and maintenance (O&M) events and sampling period. SVE system runtime for 3Q24 is documented in Table 2 below.

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Table 2. System Runtime – 3Q24

Date	Hour Meter
06/26/2024	4,813
07/19/2024	5,364
07/29/2024	5,610
08/14/2024	5,991
08/27/2024	6,258
09/10/2024	6,597
09/24/2024	6,933
Total Runtime	2,120

System runtime between the last 2Q24 reading (06/26/24) and the latest 3Q24 reading (09/24/24) was 2,120 hours. The total hours available during this period was 2208 hours; therefore, yielding a runtime percentage (%) of 98.1 for 3Q24. A vacuum pump motor failure occurred on 8/17/24; the motor was replaced by Hilcorp on 8/19/24. Cygnet telemetry data showed continuous operation throughout the quarter, except for the SVE pump failure. Photographs of relevant meter readings are documented in the attached Photographic Log.

During 3Q24, Hilcorp personnel conducted five (6) operational checks for the quarter. Additionally, one (1) maintenance events was conducted to perform the following activities:

- Installed a new motor for the SVE system pump

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 09/10/24, a composite soil-gas sample was collected from the SVE system's four Legs. A vacuum pump was connected to the SVE trailer's 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, located 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.



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Table 3. Quarterly Soil-Gas Analysis – 09/10/24

Constituents	SVE-1
Volatile Organic Compounds (mg/m³)	
Benzene	24
Toluene	170
Ethylbenzene	13
Isopropyl benzene	2.6
N-Propyl benzene	3.0
Total Xylenes	190
1,2,4-Trimethylbenzene	14
1,3,5-Trimethylbenzene	14
Gasoline Range (mg/m³)	
TPH (GC-MS) Low Fraction (i.e., GRO)	790
Gases (Mol %)	
Oxygen	21.36
Carbon Dioxide	0.09

mg/m³ – 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 3Q24 are presented in Table 4 below.

Table 4. Mass Removal and Associated Volume – 3Q24

Constituent	Mass Removal (kg) ¹	Total Mass Removed (lbs) ²	Recovered Volume (bbl)
GRO	187.0	411.3	1.53
Benzene	0.57	1.25	0.00
Toluene	40.2	88.5	0.33
Ethylbenzene	3.08	6.77	0.03
Xylenes	45.0	98.9	0.37

¹ Calculation = minutes ran * CFM * Concentration (mg/m³) * 1 M³/35.3147 ft³*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 06/26/24 to 09/24/24 and Cygnet telemetry data.



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Summary

System runtime during 3Q24 was 98.1% based on hour meter readings between 06/26/2024 and 09/24/24; Cygnet telemetry showed continuous operation, except for an SVE pump failure on 08/17/24. System maintenance included replacing the SVE pump motor on 8/19/24.

During 3Q24, no water and/or condensate were recovered during O&M events. Additionally, mass removal calculations indicated the following recovery during the quarter:

- 1.53 bbl of GRO
- 1.25 lbs of benzene
- 88.5 lbs of toluene
- 6.77 lbs of ethylbenzene
- 98.9 lbs of xylene.

Further Actions - 4th Quarter 2024

During 4Q24, the following activities are planned for the Site:

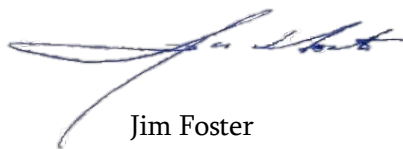
- Conduct bi-weekly Site O&M to ensure proper system function and drain any water/condensate accumulation in the moisture separator as needed
- Collect a quarterly soil-gas sample for laboratory analysis
- Prepare a 4Q24 status report.

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

Sincerely,
Timberwolf Environmental, LLC



Josh Swaringen
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

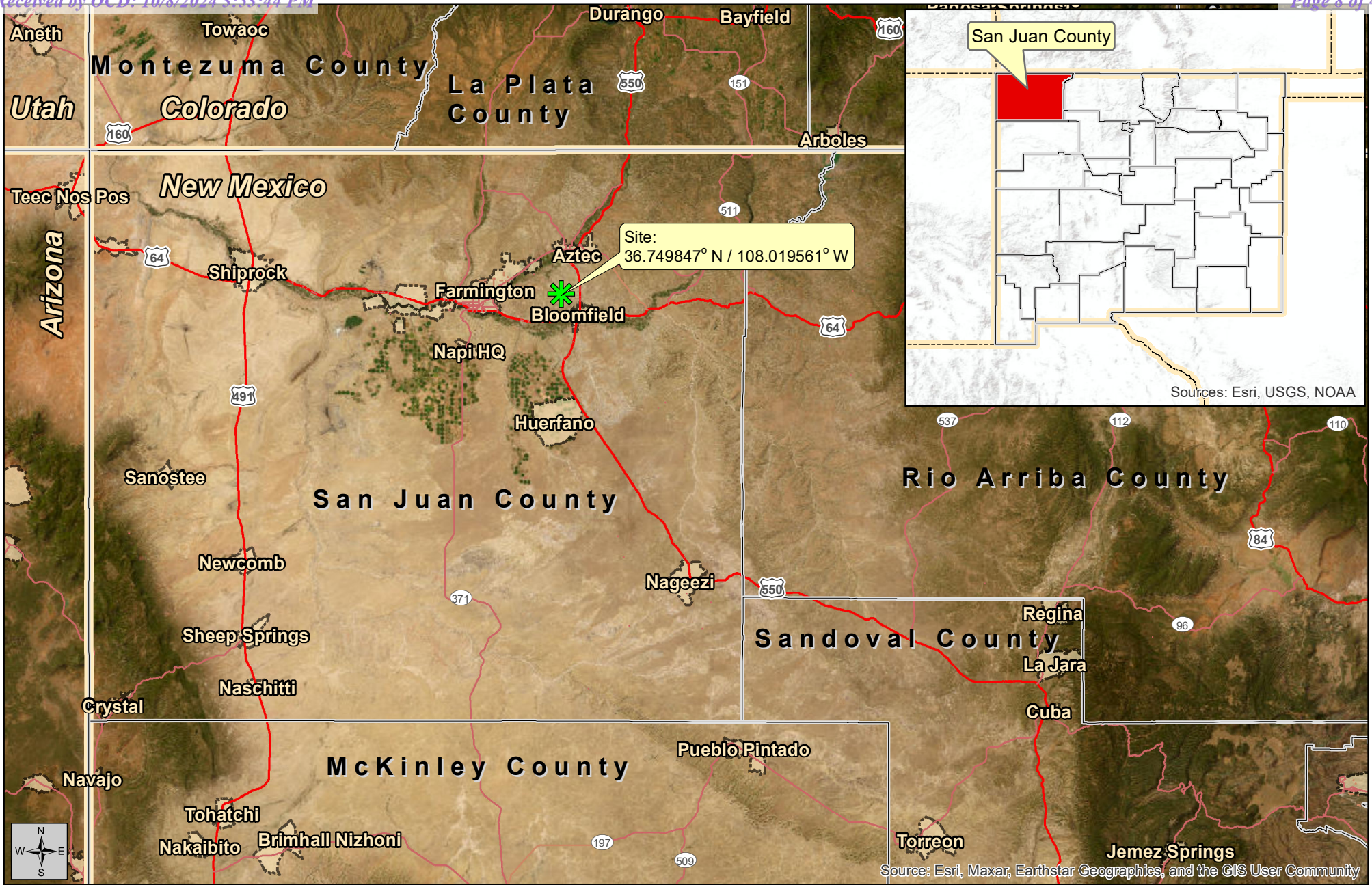


Figure 1
Site Location Map

Status Report - 3rd Quarter 2024


October 7, 2024



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

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

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

 Site

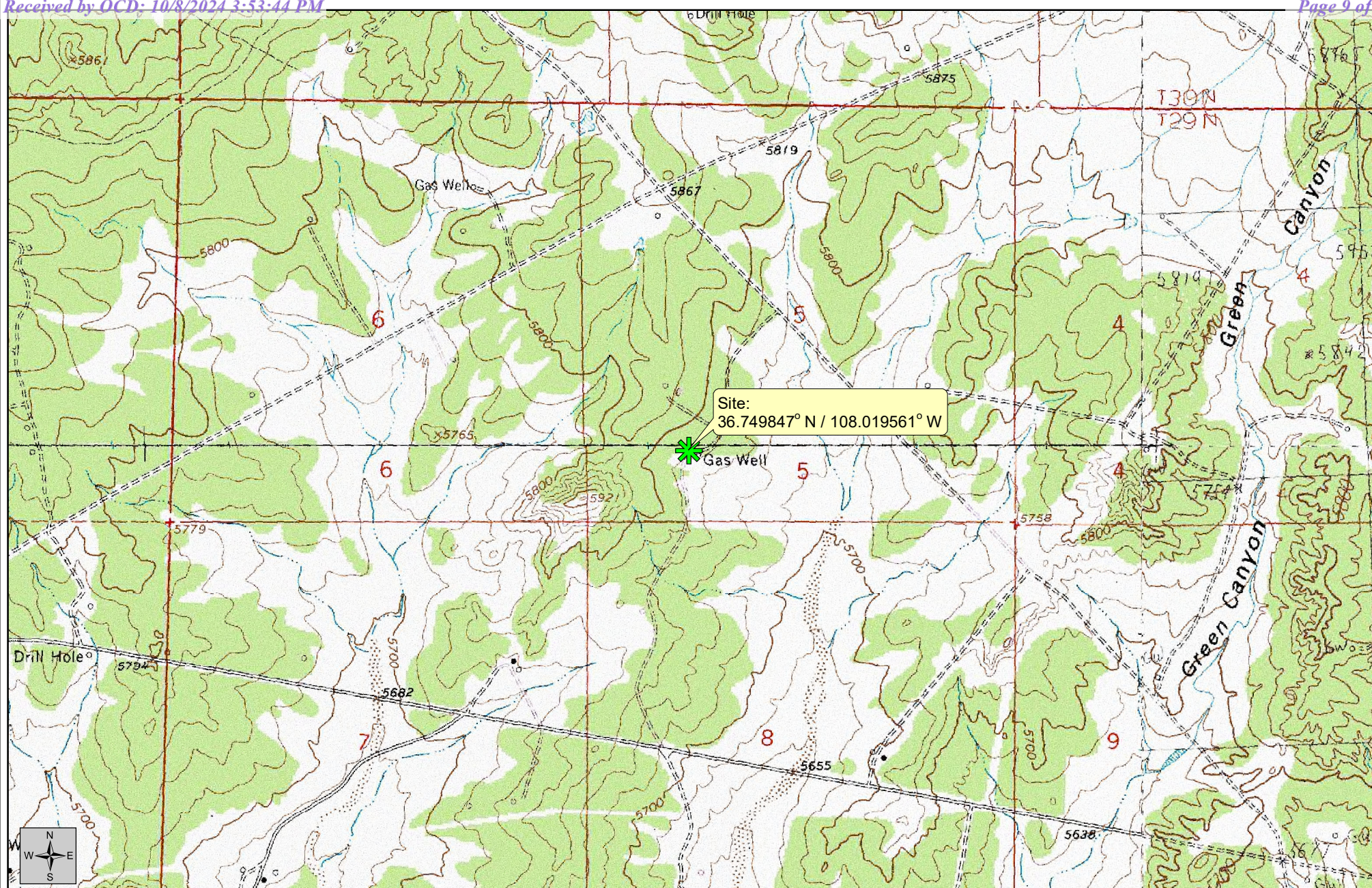


Figure 2
Topographic Map

Status Report - 3rd Quarter 2024


October 7, 2024



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

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

Datum: NAD83
Imagery Source: USGS
Quads: Aztec, Bloomfield,
Flora Vista, Horn Canyon
Vector Source: TE

 Site

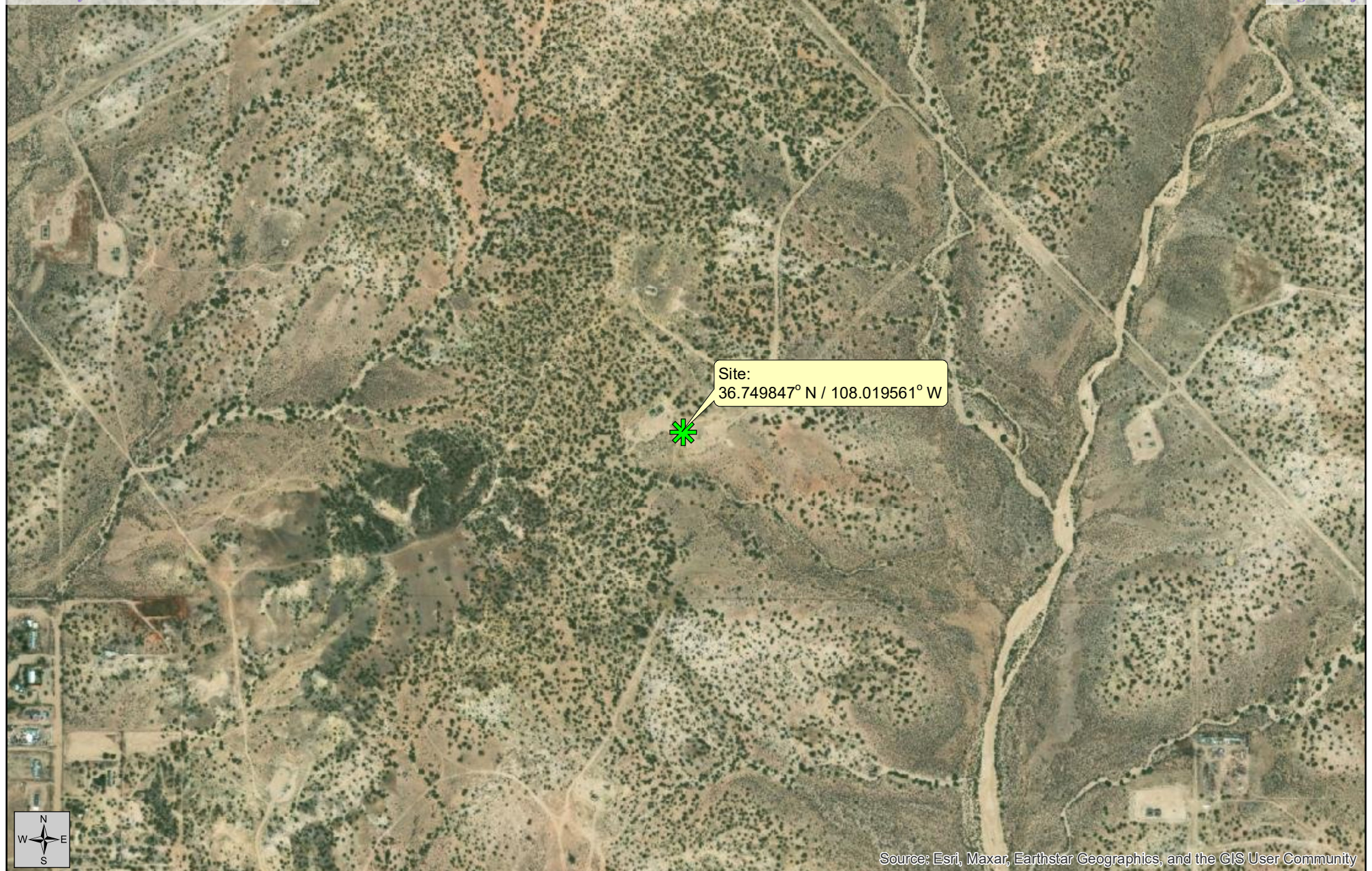


Figure 3
Aerial Map

Status Report - 3rd Quarter 2024


October 7, 2024



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

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

Datum: NAD83
Imagery Source: ESRI
Vector Source: TE

 Site

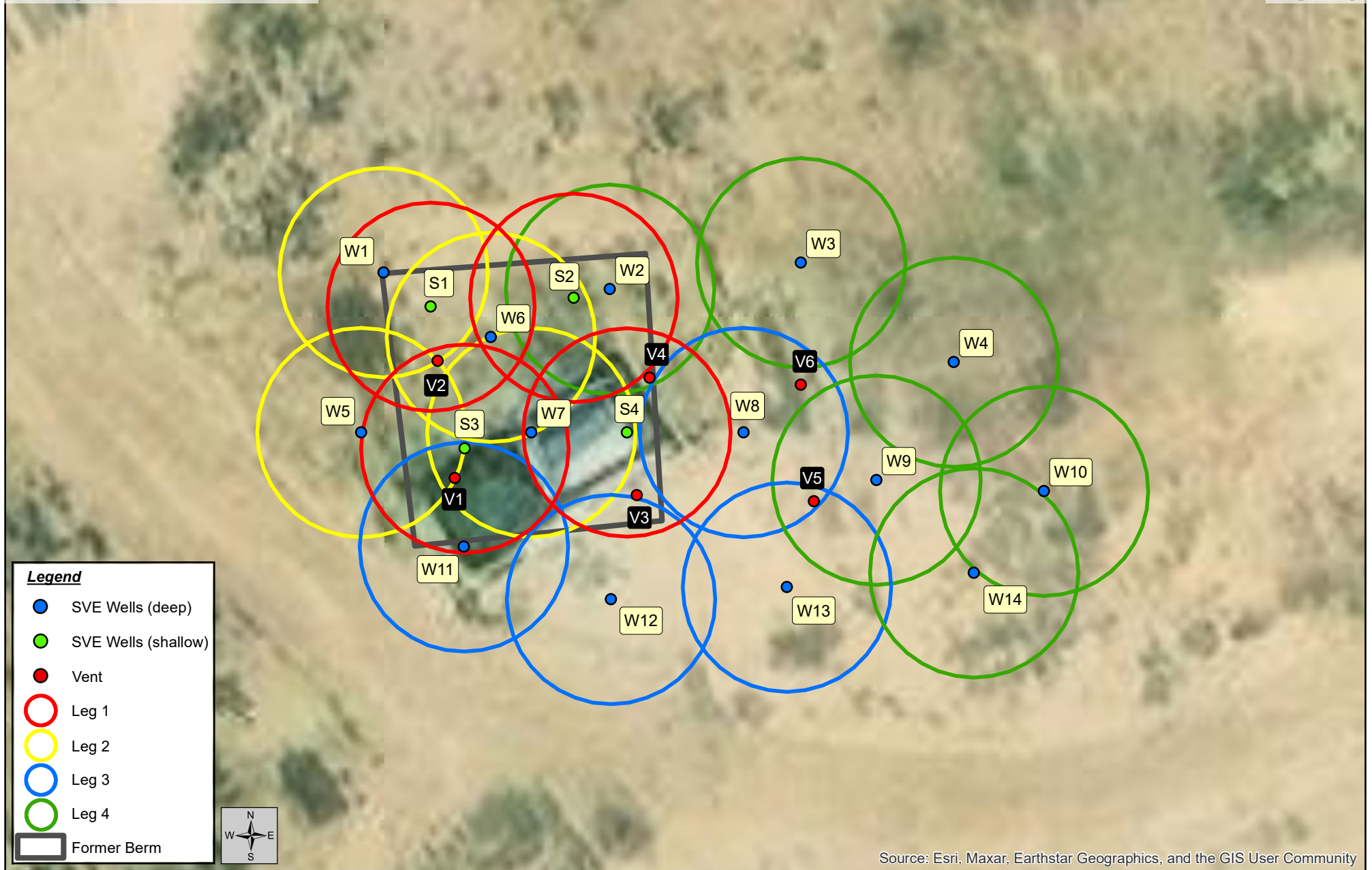


Figure 4
SVE Well
Location Map

Status Report - 3rd Quarter 2024

October 7, 2024



Created By:
Kevin Cole
TE Project No.: HEC-190009

0 25 50 75 100 Feet
1:300

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 - 3rd Quarter 2024
Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
San Juan County, New Mexico**

Date	Hour Meter (hrs)	Water/Condensate Recovered (gal)	Maintenance Performed
07/19/24	5,364	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.
07/29/24	5,610	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.
08/14/24	5,991	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.
08/19/24	--	--	• The motor was replaced by Hilcorp and SVE system was returned to online.
08/27/24	6,258	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.
09/10/24	6,597	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.
09/24/24	6,933	0	• Brandon Sinclair with Hilcorp performed SVE system O&M checks.

Table A-2. Soil-Gas Analysis - 09/10/24
Status Report - 3rd Quarter 2024
Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
San Juan County, New Mexico

Constituents	SVE-1
Volatiles (µg/m³)	
Acetone	< 20,000
Benzene	24,000
Bromodichloromethane	< 2,000
Bromoform	< 2,000
Bromomethane	< 6,000
Carbon disulfide	< 20,000
Carbon tetrachloride	< 2,000
Chlorobenzene	< 2,000
Chloroethane	< 4,000
Chloroform	< 2,000
Chloromethane	< 6,000
2-Chlorotoluene	< 2,000
Dibromochloromethane	< 2,000
1,2-Dibromoethane	< 2,000
1,2-Dichlorobenzene	< 2,000
1,3-Dichlorobenzene	< 2,000
1,4-Dichlorobenzene	< 2,000
1,2-Dichloroethane	< 2,000
1,1-Dichloroethane	< 2,000
1,1-Dichloroethene	< 2,000
cis-1,2-Dichloroethene (cis-1,2-DCE)	< 2,000
trans-1,2-Dichloroethene (trans-1,2-DCE)	< 2,000
1,2-Dichloropropane	< 2,000
cis-1,3-Dichloropropene	< 2,000
trans-1,3-Dichloropropene	< 2,000
Ethylbenzene	13,000
Trichlorofluoromethane	< 2,000
Dichlorodifluoromethane	< 2,000
Hexachloro-1,3-butadiene	< 2,000
Isopropylbenzene	2,600
Methylene Chloride	< 6,000
n-Propylbenzene	3,000
2-Butanone (MEK)	< 2,000
4-Methyl-2-pentanone (MIBK)	< 20,000
MTBE	< 2,000
Naphthalene	< 4,000

Table A-2. Soil-Gas Analysis - 09/10/24
Status Report - 3rd Quarter 2024
Fifield 5 No. 1 (OCD Incident No. NVF1718155324)
San Juan County, New Mexico

Constituents	SVE-1
Styrene	< 2,000
1,1,2,2-Tetrachloroethane	< 2,000
Toluene	170,000
1,2,4-Trichlorobenzene	< 2,000
1,1,1-Trichloroethane	< 2,000
1,1,2-Trichloroethane	< 2,000
1,2,4-Trimethylbenzene	14,000
1,3,5-Trimethylbenzene	14,000
Vinyl chloride	< 2,000
Total Xylenes	190,000
Gasoline Range ($\mu\text{g}/\text{m}^3$)	
Gasoline Range Organics (GRO)	790,000
Gases (Mol %)	
Oxygen	21.36
Carbon Dioxide	0.09
Methane	< 0.01

$\mu\text{g}/\text{m}^3$ – micrograms per cubic meter



Mol % – mole percent

Photographic Log



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 – 3 rd Quarter 2024	Date:	July – September, 2024
Photo No.: 1			
Direction: N/A			
Comments: View of hour meter on 06/26/24.			
Photo No.: 2			
Direction: N/A			
Comments: View of hour meter on 07/19/24.			



1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
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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 – 3 rd Quarter 2024	Date:	July – September, 2024
Photo No.: 3			
Direction: N/A			
Comments: View of hour meter on 07/29/24.			
Photo No.: 4			
Direction: N/A			
Comments: View of hour meter on 08/14/24.			



1115 Welsh Ave., Suite B
College Station, TX 77840
979.324.2139
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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 – 3 rd Quarter 2024	Date:	July – September, 2024
Photo No.: 5		DIRECTION 180 deg(T) 36.74980°N 108.01960°W ACCURACY 5 m DATUM WGS84	
Direction: N/A			
Comments: View of hour meter on 08/27/2024.		2024-08-27 12:17:57-06:00	
Photo No.: 6		DIRECTION 146 deg(T) 36.74982°N 108.01957°W ACCURACY 4 m DATUM WGS84	
Direction: N/A			
Comments: View of hour meter on 09/10/24.		2024-09-10 15:05:14-06:00	



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College Station, TX 77840
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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 – 3 rd Quarter 2024	Date:	July – September, 2024
Photo No.: 7			
Direction: N/A			
Comments: View of hour meter on 09/24/24.			
Photo No.:			
Direction: N/A			
Comments:			

Laboratory Report and Chain-of-Custody Documents



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 10/4/2024 12:38:00 PM

JOB DESCRIPTION

Fifield 5 #1

JOB NUMBER

885-11589-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

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

Authorization



Generated
10/4/2024 12:38:00 PM

Authorized for release by
Michelle Garcia, Project Manager
michelle.garcia@et.eurofinsus.com
(505)345-3975

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

Laboratory Job ID: 885-11589-1

Table of Contents

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Definitions/Glossary

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

Job ID: 885-11589-1

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: 885-11589-1

Job ID: 885-11589-1Eurofins Albuquerque

Job Narrative
885-11589-1

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

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

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

Receipt

The sample was received on 9/11/2024 7:30 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 20.5°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

Method 8015D GRO_MS: Surrogate 4-BFB for GRO [C6-C10] recovery for the following sample was outside control limits: (CCV 885-12872/2). 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/MS VOA

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

Eurofins Albuquerque

Client Sample Results

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

Job ID: 885-11589-1

Client Sample ID: SVE-1
Date Collected: 09/10/24 15:00
Date Received: 09/11/24 07:30
Sample Container: Tedlar Bag 1L

Lab Sample ID: 885-11589-1
Matrix: Air

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]	790		10	ug/L			09/23/24 18:18	2	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	99		52 - 172				09/23/24 18:18	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		2.0	ug/L			09/24/24 12:20	2	
1,1,1-Trichloroethane	ND		2.0	ug/L			09/24/24 12:20	2	
1,1,2,2-Tetrachloroethane	ND		4.0	ug/L			09/24/24 12:20	2	
1,1,2-Trichloroethane	ND		2.0	ug/L			09/24/24 12:20	2	
1,1-Dichloroethane	ND		2.0	ug/L			09/24/24 12:20	2	
1,1-Dichloroethene	ND		2.0	ug/L			09/24/24 12:20	2	
1,1-Dichloropropene	ND		2.0	ug/L			09/24/24 12:20	2	
1,2,3-Trichlorobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
1,2,3-Trichloropropane	ND		4.0	ug/L			09/24/24 12:20	2	
1,2,4-Trichlorobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
1,2,4-Trimethylbenzene	14		2.0	ug/L			09/24/24 12:20	2	
1,2-Dibromo-3-Chloropropane	ND		4.0	ug/L			09/24/24 12:20	2	
1,2-Dibromoethane (EDB)	ND		2.0	ug/L			09/24/24 12:20	2	
1,2-Dichlorobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
1,2-Dichloroethane (EDC)	ND		2.0	ug/L			09/24/24 12:20	2	
1,2-Dichloropropane	ND		2.0	ug/L			09/24/24 12:20	2	
1,3,5-Trimethylbenzene	14		2.0	ug/L			09/24/24 12:20	2	
1,3-Dichlorobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
1,3-Dichloropropane	ND		2.0	ug/L			09/24/24 12:20	2	
1,4-Dichlorobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
1-Methylnaphthalene	ND		8.0	ug/L			09/24/24 12:20	2	
2,2-Dichloropropane	ND		4.0	ug/L			09/24/24 12:20	2	
2-Butanone	ND		20	ug/L			09/24/24 12:20	2	
2-Chlorotoluene	ND		2.0	ug/L			09/24/24 12:20	2	
2-Hexanone	ND		20	ug/L			09/24/24 12:20	2	
2-Methylnaphthalene	ND		8.0	ug/L			09/24/24 12:20	2	
4-Chlorotoluene	ND		2.0	ug/L			09/24/24 12:20	2	
4-Isopropyltoluene	ND		2.0	ug/L			09/24/24 12:20	2	
4-Methyl-2-pentanone	ND		20	ug/L			09/24/24 12:20	2	
Acetone	ND		20	ug/L			09/24/24 12:20	2	
Benzene	24		2.0	ug/L			09/24/24 12:20	2	
Bromobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
Bromodichloromethane	ND		2.0	ug/L			09/24/24 12:20	2	
Dibromochloromethane	ND		2.0	ug/L			09/24/24 12:20	2	
Bromoform	ND		2.0	ug/L			09/24/24 12:20	2	
Bromomethane	ND		6.0	ug/L			09/24/24 12:20	2	
Carbon disulfide	ND		20	ug/L			09/24/24 12:20	2	
Carbon tetrachloride	ND		2.0	ug/L			09/24/24 12:20	2	
Chlorobenzene	ND		2.0	ug/L			09/24/24 12:20	2	
Chloroethane	ND		4.0	ug/L			09/24/24 12:20	2	
Chloroform	ND		2.0	ug/L			09/24/24 12:20	2	

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Client Sample Results

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

Job ID: 885-11589-1

Client Sample ID: SVE-1
Date Collected: 09/10/24 15:00
Date Received: 09/11/24 07:30
Sample Container: Tedlar Bag 1L

Lab Sample ID: 885-11589-1
Matrix: Air

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloromethane	ND		6.0	ug/L			09/24/24 12:20	2	
cis-1,2-Dichloroethene	ND		2.0	ug/L			09/24/24 12:20	2	
cis-1,3-Dichloropropene	ND		2.0	ug/L			09/24/24 12:20	2	
Dibromomethane	ND		2.0	ug/L			09/24/24 12:20	2	
Dichlorodifluoromethane	ND		2.0	ug/L			09/24/24 12:20	2	
Ethylbenzene	13		2.0	ug/L			09/24/24 12:20	2	
Hexachlorobutadiene	ND		2.0	ug/L			09/24/24 12:20	2	
Isopropylbenzene	2.6		2.0	ug/L			09/24/24 12:20	2	
Methyl-tert-butyl Ether (MTBE)	ND		2.0	ug/L			09/24/24 12:20	2	
Methylene Chloride	ND		6.0	ug/L			09/24/24 12:20	2	
n-Butylbenzene	ND		6.0	ug/L			09/24/24 12:20	2	
N-Propylbenzene	3.0		2.0	ug/L			09/24/24 12:20	2	
Naphthalene	ND		4.0	ug/L			09/24/24 12:20	2	
sec-Butylbenzene	ND		2.0	ug/L			09/24/24 12:20	2	
Styrene	ND		2.0	ug/L			09/24/24 12:20	2	
tert-Butylbenzene	ND		2.0	ug/L			09/24/24 12:20	2	
Tetrachloroethene (PCE)	ND		2.0	ug/L			09/24/24 12:20	2	
Toluene	170		2.0	ug/L			09/24/24 12:20	2	
trans-1,2-Dichloroethene	ND		2.0	ug/L			09/24/24 12:20	2	
trans-1,3-Dichloropropene	ND		2.0	ug/L			09/24/24 12:20	2	
Trichloroethene (TCE)	ND		2.0	ug/L			09/24/24 12:20	2	
Trichlorofluoromethane	ND		2.0	ug/L			09/24/24 12:20	2	
Vinyl chloride	ND		2.0	ug/L			09/24/24 12:20	2	
Xylenes, Total	190		3.0	ug/L			09/24/24 12:20	2	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	84		70 - 130				09/24/24 12:20	2	
Toluene-d8 (Surr)	130		70 - 130				09/24/24 12:20	2	
4-Bromofluorobenzene (Surr)	110		70 - 130				09/24/24 12:20	2	
Dibromofluoromethane (Surr)	93		70 - 130				09/24/24 12:20	2	

QC Sample Results

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

Job ID: 885-11589-1

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

Lab Sample ID: MB 885-12872/4

Matrix: Air

Analysis Batch: 12872

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		5.0	ug/L			09/23/24 14:03	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		52 - 172				09/23/24 14:03	1

Lab Sample ID: LCS 885-12872/3

Matrix: Air

Analysis Batch: 12872

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]	4250	4340		ug/L		102	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	94		52 - 172				

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

Lab Sample ID: MB 885-12855/1005

Matrix: Air

Analysis Batch: 12855

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		1.0	ug/L			09/24/24 11:55	1
1,1,1-Trichloroethane	ND		1.0	ug/L			09/24/24 11:55	1
1,1,2,2-Tetrachloroethane	ND		2.0	ug/L			09/24/24 11:55	1
1,1,2-Trichloroethane	ND		1.0	ug/L			09/24/24 11:55	1
1,1-Dichloroethane	ND		1.0	ug/L			09/24/24 11:55	1
1,1-Dichloroethene	ND		1.0	ug/L			09/24/24 11:55	1
1,1-Dichloropropene	ND		1.0	ug/L			09/24/24 11:55	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2,3-Trichloropropane	ND		2.0	ug/L			09/24/24 11:55	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dibromo-3-Chloropropane	ND		2.0	ug/L			09/24/24 11:55	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dichloroethane (EDC)	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dichloropropane	ND		1.0	ug/L			09/24/24 11:55	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,3-Dichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,3-Dichloropropane	ND		1.0	ug/L			09/24/24 11:55	1
1,4-Dichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1-Methylnaphthalene	ND		4.0	ug/L			09/24/24 11:55	1
2,2-Dichloropropane	ND		2.0	ug/L			09/24/24 11:55	1
2-Butanone	ND		10	ug/L			09/24/24 11:55	1
2-Chlorotoluene	ND		1.0	ug/L			09/24/24 11:55	1
2-Hexanone	ND		10	ug/L			09/24/24 11:55	1

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QC Sample Results

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

Job ID: 885-11589-1

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

Lab Sample ID: MB 885-12855/1005

Matrix: Air

Analysis Batch: 12855

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		4.0	ug/L			09/24/24 11:55	1
4-Chlorotoluene	ND		1.0	ug/L			09/24/24 11:55	1
4-Isopropyltoluene	ND		1.0	ug/L			09/24/24 11:55	1
4-Methyl-2-pentanone	ND		10	ug/L			09/24/24 11:55	1
Acetone	ND		10	ug/L			09/24/24 11:55	1
Benzene	ND		1.0	ug/L			09/24/24 11:55	1
Bromobenzene	ND		1.0	ug/L			09/24/24 11:55	1
Bromodichloromethane	ND		1.0	ug/L			09/24/24 11:55	1
Dibromochloromethane	ND		1.0	ug/L			09/24/24 11:55	1
Bromoform	ND		1.0	ug/L			09/24/24 11:55	1
Bromomethane	ND		3.0	ug/L			09/24/24 11:55	1
Carbon disulfide	ND		10	ug/L			09/24/24 11:55	1
Carbon tetrachloride	ND		1.0	ug/L			09/24/24 11:55	1
Chlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
Chloroethane	ND		2.0	ug/L			09/24/24 11:55	1
Chloroform	ND		1.0	ug/L			09/24/24 11:55	1
Chloromethane	ND		3.0	ug/L			09/24/24 11:55	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			09/24/24 11:55	1
cis-1,3-Dichloropropene	ND		1.0	ug/L			09/24/24 11:55	1
Dibromomethane	ND		1.0	ug/L			09/24/24 11:55	1
Dichlorodifluoromethane	ND		1.0	ug/L			09/24/24 11:55	1
Ethylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Hexachlorobutadiene	ND		1.0	ug/L			09/24/24 11:55	1
Isopropylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Methyl-tert-butyl Ether (MTBE)	ND		1.0	ug/L			09/24/24 11:55	1
Methylene Chloride	ND		3.0	ug/L			09/24/24 11:55	1
n-Butylbenzene	ND		3.0	ug/L			09/24/24 11:55	1
N-Propylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Naphthalene	ND		2.0	ug/L			09/24/24 11:55	1
sec-Butylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Styrene	ND		1.0	ug/L			09/24/24 11:55	1
tert-Butylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Tetrachloroethene (PCE)	ND		1.0	ug/L			09/24/24 11:55	1
Toluene	ND		1.0	ug/L			09/24/24 11:55	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			09/24/24 11:55	1
trans-1,3-Dichloropropene	ND		1.0	ug/L			09/24/24 11:55	1
Trichloroethene (TCE)	ND		1.0	ug/L			09/24/24 11:55	1
Trichlorofluoromethane	ND		1.0	ug/L			09/24/24 11:55	1
Vinyl chloride	ND		1.0	ug/L			09/24/24 11:55	1
Xylenes, Total	ND		1.5	ug/L			09/24/24 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		09/24/24 11:55	1
Toluene-d8 (Surr)	98		70 - 130		09/24/24 11:55	1
4-Bromofluorobenzene (Surr)	91		70 - 130		09/24/24 11:55	1
Dibromofluoromethane (Surr)	102		70 - 130		09/24/24 11:55	1

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QC Sample Results

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

Job ID: 885-11589-1

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

Lab Sample ID: MB 885-12855/5

Matrix: Air

Analysis Batch: 12855

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		1.0	ug/L			09/24/24 11:55	1
1,1,1-Trichloroethane	ND		1.0	ug/L			09/24/24 11:55	1
1,1,2,2-Tetrachloroethane	ND		2.0	ug/L			09/24/24 11:55	1
1,1,2-Trichloroethane	ND		1.0	ug/L			09/24/24 11:55	1
1,1-Dichloroethane	ND		1.0	ug/L			09/24/24 11:55	1
1,1-Dichloroethene	ND		1.0	ug/L			09/24/24 11:55	1
1,1-Dichloropropene	ND		1.0	ug/L			09/24/24 11:55	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2,3-Trichloropropane	ND		2.0	ug/L			09/24/24 11:55	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dibromo-3-Chloropropane	ND		2.0	ug/L			09/24/24 11:55	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dichloroethane (EDC)	ND		1.0	ug/L			09/24/24 11:55	1
1,2-Dichloropropane	ND		1.0	ug/L			09/24/24 11:55	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,3-Dichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1,3-Dichloropropane	ND		1.0	ug/L			09/24/24 11:55	1
1,4-Dichlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
1-Methylnaphthalene	ND		4.0	ug/L			09/24/24 11:55	1
2,2-Dichloropropane	ND		2.0	ug/L			09/24/24 11:55	1
2-Butanone	ND		10	ug/L			09/24/24 11:55	1
2-Chlorotoluene	ND		1.0	ug/L			09/24/24 11:55	1
2-Hexanone	ND		10	ug/L			09/24/24 11:55	1
2-Methylnaphthalene	ND		4.0	ug/L			09/24/24 11:55	1
4-Chlorotoluene	ND		1.0	ug/L			09/24/24 11:55	1
4-Isopropyltoluene	ND		1.0	ug/L			09/24/24 11:55	1
4-Methyl-2-pentanone	ND		10	ug/L			09/24/24 11:55	1
Acetone	ND		10	ug/L			09/24/24 11:55	1
Benzene	ND		1.0	ug/L			09/24/24 11:55	1
Bromobenzene	ND		1.0	ug/L			09/24/24 11:55	1
Bromodichloromethane	ND		1.0	ug/L			09/24/24 11:55	1
Dibromochloromethane	ND		1.0	ug/L			09/24/24 11:55	1
Bromoform	ND		1.0	ug/L			09/24/24 11:55	1
Bromomethane	ND		3.0	ug/L			09/24/24 11:55	1
Carbon disulfide	ND		10	ug/L			09/24/24 11:55	1
Carbon tetrachloride	ND		1.0	ug/L			09/24/24 11:55	1
Chlorobenzene	ND		1.0	ug/L			09/24/24 11:55	1
Chloroethane	ND		2.0	ug/L			09/24/24 11:55	1
Chloroform	ND		1.0	ug/L			09/24/24 11:55	1
Chloromethane	ND		3.0	ug/L			09/24/24 11:55	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			09/24/24 11:55	1
cis-1,3-Dichloropropene	ND		1.0	ug/L			09/24/24 11:55	1
Dibromomethane	ND		1.0	ug/L			09/24/24 11:55	1
Dichlorodifluoromethane	ND		1.0	ug/L			09/24/24 11:55	1
Ethylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Hexachlorobutadiene	ND		1.0	ug/L			09/24/24 11:55	1

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QC Sample Results

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

Job ID: 885-11589-1

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

Lab Sample ID: MB 885-12855/5
Matrix: Air
Analysis Batch: 12855

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Isopropylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Methyl-tert-butyl Ether (MTBE)	ND		1.0	ug/L			09/24/24 11:55	1
Methylene Chloride	ND		3.0	ug/L			09/24/24 11:55	1
n-Butylbenzene	ND		3.0	ug/L			09/24/24 11:55	1
N-Propylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Naphthalene	ND		2.0	ug/L			09/24/24 11:55	1
sec-Butylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Styrene	ND		1.0	ug/L			09/24/24 11:55	1
tert-Butylbenzene	ND		1.0	ug/L			09/24/24 11:55	1
Tetrachloroethene (PCE)	ND		1.0	ug/L			09/24/24 11:55	1
Toluene	ND		1.0	ug/L			09/24/24 11:55	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			09/24/24 11:55	1
trans-1,3-Dichloropropene	ND		1.0	ug/L			09/24/24 11:55	1
Trichloroethene (TCE)	ND		1.0	ug/L			09/24/24 11:55	1
Trichlorofluoromethane	ND		1.0	ug/L			09/24/24 11:55	1
Vinyl chloride	ND		1.0	ug/L			09/24/24 11:55	1
Xylenes, Total	ND		1.5	ug/L			09/24/24 11:55	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		09/24/24 11:55	1
Toluene-d8 (Surr)	98		70 - 130		09/24/24 11:55	1
4-Bromofluorobenzene (Surr)	91		70 - 130		09/24/24 11:55	1
Dibromofluoromethane (Surr)	102		70 - 130		09/24/24 11:55	1

Lab Sample ID: LCS 885-12855/4
Matrix: Air
Analysis Batch: 12855

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	21.7		ug/L		108	70 - 130
Benzene	20.1	23.2		ug/L		115	70 - 130
Chlorobenzene	20.1	20.5		ug/L		102	70 - 130
Toluene	20.2	20.8		ug/L		103	70 - 130
Trichloroethene (TCE)	20.2	21.5		ug/L		107	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Toluene-d8 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130
Dibromofluoromethane (Surr)	103		70 - 130

Lab Sample ID: 885-11589-1 DU
Matrix: Air
Analysis Batch: 12855

Client Sample ID: SVE-1
Prep Type: Total/NA

Analyte	Sample	Sample	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
	Result	Qualifier						
1,1,1,2-Tetrachloroethane	ND		ND		ug/L		NC	20
1,1,1-Trichloroethane	ND		ND		ug/L		NC	20

Eurofins Albuquerque

QC Sample Results

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

Job ID: 885-11589-1

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

Lab Sample ID: 885-11589-1 DU

Client Sample ID: SVE-1

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 12855

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
1,1,2,2-Tetrachloroethane	ND		ND		ug/L		NC	20
1,1,2-Trichloroethane	ND		ND		ug/L		NC	20
1,1-Dichloroethane	ND		ND		ug/L		NC	20
1,1-Dichloroethene	ND		ND		ug/L		NC	20
1,1-Dichloropropene	ND		ND		ug/L		NC	20
1,2,3-Trichlorobenzene	ND		ND		ug/L		NC	20
1,2,3-Trichloropropane	ND		ND		ug/L		NC	20
1,2,4-Trichlorobenzene	ND		ND		ug/L		NC	20
1,2,4-Trimethylbenzene	14		13.2		ug/L		3	20
1,2-Dibromo-3-Chloropropane	ND		ND		ug/L		NC	20
1,2-Dibromoethane (EDB)	ND		ND		ug/L		NC	20
1,2-Dichlorobenzene	ND		ND		ug/L		NC	20
1,2-Dichloroethane (EDC)	ND		ND		ug/L		NC	20
1,2-Dichloropropane	ND		ND		ug/L		NC	20
1,3,5-Trimethylbenzene	14		13.6		ug/L		1	20
1,3-Dichlorobenzene	ND		ND		ug/L		NC	20
1,3-Dichloropropane	ND		ND		ug/L		NC	20
1,4-Dichlorobenzene	ND		ND		ug/L		NC	20
1-Methylnaphthalene	ND		ND		ug/L		NC	20
2,2-Dichloropropane	ND		ND		ug/L		NC	20
2-Butanone	ND		ND		ug/L		NC	20
2-Chlorotoluene	ND		ND		ug/L		NC	20
2-Hexanone	ND		ND		ug/L		NC	20
2-Methylnaphthalene	ND		ND		ug/L		NC	20
4-Chlorotoluene	ND		ND		ug/L		NC	20
4-Isopropyltoluene	ND		ND		ug/L		NC	20
4-Methyl-2-pentanone	ND		ND		ug/L		NC	20
Acetone	ND		ND		ug/L		NC	20
Benzene	24		23.3		ug/L		2	20
Bromobenzene	ND		ND		ug/L		NC	20
Bromodichloromethane	ND		ND		ug/L		NC	20
Dibromochloromethane	ND		ND		ug/L		NC	20
Bromoform	ND		ND		ug/L		NC	20
Bromomethane	ND		ND		ug/L		NC	20
Carbon disulfide	ND		ND		ug/L		NC	20
Carbon tetrachloride	ND		ND		ug/L		NC	20
Chlorobenzene	ND		ND		ug/L		NC	20
Chloroethane	ND		ND		ug/L		NC	20
Chloroform	ND		ND		ug/L		NC	20
Chloromethane	ND		ND		ug/L		NC	20
cis-1,2-Dichloroethene	ND		ND		ug/L		NC	20
cis-1,3-Dichloropropene	ND		ND		ug/L		NC	20
Dibromomethane	ND		ND		ug/L		NC	20
Dichlorodifluoromethane	ND		ND		ug/L		NC	20
Ethylbenzene	13		13.1		ug/L		0.6	20
Hexachlorobutadiene	ND		ND		ug/L		NC	20
Isopropylbenzene	2.6		2.54		ug/L		4	20
Methyl-tert-butyl Ether (MTBE)	ND		ND		ug/L		NC	20
Methylene Chloride	ND		ND		ug/L		NC	20

Eurofins Albuquerque

QC Sample Results

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

Job ID: 885-11589-1

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

Lab Sample ID: 885-11589-1 DU
Matrix: Air
Analysis Batch: 12855

Client Sample ID: SVE-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
n-Butylbenzene	ND		ND		ug/L		NC	20
N-Propylbenzene	3.0		2.95		ug/L		2	20
Naphthalene	ND		ND		ug/L		NC	20
sec-Butylbenzene	ND		ND		ug/L		NC	20
Styrene	ND		ND		ug/L		NC	20
tert-Butylbenzene	ND		ND		ug/L		NC	20
Tetrachloroethene (PCE)	ND		ND		ug/L		NC	20
Toluene	170		167		ug/L		3	20
trans-1,2-Dichloroethene	ND		ND		ug/L		NC	20
trans-1,3-Dichloropropene	ND		ND		ug/L		NC	20
Trichloroethene (TCE)	ND		ND		ug/L		NC	20
Trichlorofluoromethane	ND		ND		ug/L		NC	20
Vinyl chloride	ND		ND		ug/L		NC	20
Xylenes, Total	190		184		ug/L		3	20
Surrogate	%Recovery	DU Qualifier	DU	Limits				
1,2-Dichloroethane-d4 (Surr)	86			70 - 130				
Toluene-d8 (Surr)	128			70 - 130				
4-Bromofluorobenzene (Surr)	110			70 - 130				
Dibromofluoromethane (Surr)	93			70 - 130				

QC Association Summary

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

Job ID: 885-11589-1

GC/MS VOA

Analysis Batch: 12855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11589-1	SVE-1	Total/NA	Air	8260B	
MB 885-12855/1005	Method Blank	Total/NA	Air	8260B	
MB 885-12855/5	Method Blank	Total/NA	Air	8260B	
LCS 885-12855/4	Lab Control Sample	Total/NA	Air	8260B	
885-11589-1 DU	SVE-1	Total/NA	Air	8260B	

Analysis Batch: 12872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11589-1	SVE-1	Total/NA	Air	8015M/D	
MB 885-12872/4	Method Blank	Total/NA	Air	8015M/D	
LCS 885-12872/3	Lab Control Sample	Total/NA	Air	8015M/D	

Lab Chronicle

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

Job ID: 885-11589-1

Client Sample ID: SVE-1
Date Collected: 09/10/24 15:00
Date Received: 09/11/24 07:30

Lab Sample ID: 885-11589-1
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015M/D		2	12872	CM	EET ALB	09/23/24 18:18
Total/NA	Analysis	8260B		2	12855	CM	EET ALB	09/24/24 12:20

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: 885-11589-1

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

Eurofins Albuquerque

Accreditation/Certification Summary

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

Job ID: 885-11589-1

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

Eurofins Albuquerque

Accreditation/Certification Summary

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

Job ID: 885-11589-1

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



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ANALYTICAL SUMMARY REPORT

September 18, 2024

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

Work Order: B24091176 Quote ID: B15626

Project Name: Fifield 5 #1 88501698

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 9/12/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24091176-001	SVE-1 (855-11589-1)	09/10/24 15:00	09/12/24	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., 1120 So. 27th Street, Billings, MT 59101, 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.



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LABORATORY ANALYTICAL REPORT
Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Fifield 5 #1 88501698
Lab ID: B24091176-001
Client Sample ID: SVE-1 (855-11589-1)

Report Date: 09/18/24
Collection Date: 09/10/24 15:00
Date Received: 09/12/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.36	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Nitrogen	78.50	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Carbon Dioxide	0.09	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Hexanes plus	0.05	Mol %		0.01		GPA 2261-95	09/16/24 12:41 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
Hexanes plus	0.021	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
GPM Total	0.021	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj
GPM Pentanes plus	0.021	gpm		0.001		GPA 2261-95	09/16/24 12:41 / jrj

CALCULATED PROPERTIES

Gross BTU per cu ft @ Std Cond. (HHV)	2		1		GPA 2261-95	09/16/24 12:41 / jrj
Net BTU per cu ft @ std cond. (LHV)	2		1		GPA 2261-95	09/16/24 12:41 / jrj
Pseudo-critical Pressure, psia	544		1		GPA 2261-95	09/16/24 12:41 / jrj
Pseudo-critical Temperature, deg R	239		1		GPA 2261-95	09/16/24 12:41 / jrj
Specific Gravity @ 60/60F	0.998		0.001		D3588-81	09/16/24 12:41 / jrj
Air, %	97.58		0.01		GPA 2261-95	09/16/24 12:41 / jrj
- The analysis was not corrected for air.						

COMMENTS

-						09/16/24 12:41 / 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	MCL - Maximum Contaminant Level
	QCL - Quality Control Limit	ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Work Order: B24091176

Report Date: 09/18/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95										Batch: R428958
Lab ID: B24091168-001ADUP	12	Sample Duplicate					Run: GCNGA-B_240916A		09/16/24 11:03	
Oxygen		21.7	Mol %	0.01				0.2	20	
Nitrogen		78.0	Mol %	0.01				0.1	20	
Carbon Dioxide		0.23	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		0.06	Mol %	0.01				0.0	20	
Lab ID: LCS091624										
	11	Laboratory Control Sample					Run: GCNGA-B_240916A		09/16/24 02:25	
Oxygen		0.63	Mol %	0.01	126	70	130			
Nitrogen		5.91	Mol %	0.01	98	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		75.1	Mol %	0.01	100	70	130			
Ethane		6.10	Mol %	0.01	102	70	130			
Propane		5.05	Mol %	0.01	102	70	130			
Isobutane		1.43	Mol %	0.01	71	70	130			
n-Butane		2.01	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)



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Work Order Receipt Checklist

Hall Environmental

B24091176

Login completed by: Gina McCartney

Date Received: 9/12/2024

Reviewed by: ysmith

Received by: DNH

Reviewed Date: 9/16/2024

Carrier name: FedEx NDA

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	18.1°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

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.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None

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

Chain of Custody Record



Environment Testing

[illegible]

ICOC No:
885-1927

Containers

Count Container Type
1 Tedlar Bag 1L

Preservative
None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB (Fixed Gases)/ Fixed Gases	Fixed Gases

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Login Sample Receipt Checklist

Client: Hilcorp Energy

Job Number: 885-11589-1

Login Number: 11589

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?	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	
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 390986

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID:	372171
	Action Number:	390986
	Action Type:	[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Continue further actions as stated in report. 2. Submit next quarterly report by January 15, 2025.	10/28/2024