REVIEWED
By Mike Buchanan at 11:49 am, Apr 23, 2025

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Review of the 2024 Annual Groundwater Monitoring Report for Farmington B Com #1E: content satisfactory
1. Iron (Fe) may be suspended as a constituent of concern for future groundwater sampling events as at least eight (8) consecutive quarters have demonstrated to be below the WQCC standards for domestic water supply.
2. Continue to sample for Manganese for future sampling events.
3. Submit the 2025 groundwater annual report to the OCD, no later than April 1, 2026.

March 3, 2025

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

Re: 2024 Annual Groundwater Monitoring Report
Farmington B Com #1E
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NAUTOFAB000168
NMOCD Administrative Order: 3R-084

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2024 Annual Groundwater Monitoring* Report to the New Mexico Oil Conservation Division (NMOCD). This report documents groundwater monitoring activities conducted during 2024 at the Farmington B Com #1E natural gas production well (Site). The Site is located on private property near the intersection of East Murray Drive and South Carlton Avenue in Farmington, New Mexico (36.72113°, -108.19048°) as shown on Figure 1. Well locations and general Site features are shown on Figure 2.

SITE BACKGROUND

Conoco Inc., the predecessor to ConocoPhillips Company (ConocoPhillips), owned and operated the Site from July 1991 to January 1997. In 1997, Merrion Oil & Gas Company (Merrion) purchased the property and assets from ConocoPhillips and is the current property owner and well operator.

Petroleum hydrocarbon-impacted soil was first identified in March 1997 during a Phase II Environmental Site Assessment conducted before the property's transfer from ConocoPhillips to Merrion. Soil impacts were confirmed north of a production storage tank and west of a separator/dehydrator pit. In September 1997, approximately 906 cubic yards of impacted soil were excavated and removed. During backfilling, about 10 gallons of liquid fertilizer were applied to both excavations to enhance in-situ biodegradation of residual petroleum hydrocarbons.

Groundwater monitoring wells MW-1 through MW-6 were installed at the Site in February and August 1998. No petroleum hydrocarbons were detected in MW-2 through MW-6 during the 1998 and 1999 sampling events; however, phase-separated hydrocarbons (PSH) were present in MW-1. In May 2004, active and passive skimmers were installed in MW-1 to enhance PSH recovery but were found ineffective. The active skimmer was deemed unviable, and passive skimming or periodic hand bailing was later proposed. Additionally, quarterly groundwater pumping events using a vacuum truck were conducted at MW-1 from October 2004 to March 2008.

PSH was last detected in MW-1 on March 18, 2011, with a sheen last observed on January 28, 2015. By the fourth quarter of 2011, groundwater analytical results from all six monitoring wells indicated benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations were below New Mexico Water Quality Control Commission (NMWQCC) standards for 12 consecutive quarters of sampling and as a result, BTEX analysis was discontinued following the December 2011 sampling event. Beginning in 2012, groundwater was sampled for dissolved iron and manganese, which are the two remaining constituents of concern (COCs) exceeding the NMWQCC standards at the Site. In order to reduce dissolved iron and manganese concentrations, two injection wells (TW-1 and TW-2) were drilled and installed east and west of MW-1 in order to perform in-situ chemical oxidation (ISCO) injections. A catalyzed sodium persulfate solution was injected into these wells and into MW-1 in November 2014, March 2015, and October 2016. Quarterly gauging and sampling for dissolved iron and manganese continued after the ISCO injections were completed.

The NMOCD approved the suspension of sampling in MW-4 and MW-5 in 2024, as COC concentrations remained below the NMWQCC standards for eight consecutive sampling events. Additionally, the NMOCD authorized reducing the sampling frequency to an annual basis for wells MW-1, MW-2, MW-3, and MW-6. Once concentrations decrease to below NMWQCC standards, the sampling frequency will return to quarterly until eight consecutive quarters confirm that iron and/or manganese concentrations comply with applicable standards. In 2024, the NMOCD also approved removing iron as an analyte for all wells except MW-1.

SITE GROUNDWATER CLEANUP STANDARDS

The NMOCD requires groundwater quality standards be met as presented by the NMWQCC and listed in Title 20, Chapter 6, Part 2, Section 3103 (20.6.2.3103) of the New Mexico Administrative Code (NMAC). The following standards are presented for COCs at the Site in milligrams per liter (mg/L).

- Dissolved Iron: 1.0 mg/L
- Dissolved Manganese: 0.2 mg/L

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater sampling events were conducted in January and April 2024 from wells MW-1 through MW-6. Following these events, NMOCD approved a transition to annual sampling, which will begin in 2025. Before sample collection, depth-to-water was measured in all Site wells using a Keck oil/water interface probe. The probe was decontaminated with Alconox® soap and rinsed with distilled water before each measurement to prevent cross-contamination. Measured depth-to-water and calculated groundwater elevations are presented in Table 1 and were used to develop groundwater potentiometric surface maps for each sampling event (Figure 3). The inferred groundwater flow direction is west.

GROUNDWATER SAMPLING

Groundwater from each monitoring well was purged and sampled using a disposable bailer. Purging was accomplished by removing stagnant groundwater from the monitoring well prior to collecting a sample. Field measurements of groundwater quality parameters were collected during the purging process and are presented in Table 2. Following well purging, groundwater samples were collected directly into laboratory-provided containers and labeled with the date and time of collection, well designation, project name, sample collector's name, and parameters to be analyzed. Samples were immediately sealed and packed on ice to preserve samples. Samples

were submitted to Eurofins Environment Testing South Central, LLC (Eurofins) in Albuquerque, New Mexico for analysis of dissolved manganese and iron following Environmental Protection Agency (EPA) Method 200.7. Proper chain-of-custody procedures were followed documenting the date and time sampled, sample number, type of sample, sample collector's name, preservative used, analyses required, and sample collector's signature.

GROUNDWATER ANALYTICAL RESULTS

All Site wells met NMWQCC standards for dissolved iron during the 2024 sampling events.

Dissolved manganese concentrations exceeded NMWQCC standards in MW-1 and MW-6 during one or more sampling events in 2024. These concentrations have remained consistently elevated in both wells since sampling began in 2011.

Dissolved iron and manganese concentrations in MW-4 and MW-5 have remained compliant with NMWQCC standards for the past eight quarters. In 2024, dissolved manganese concentrations in MW-3 were also within compliance, with only occasional exceedances in previous years (2013, 2016, 2017, 2019, and 2022). A summary of analytical results is provided in Table 3 and shown in Figure 4, with complete laboratory analytical reports included in Appendix A.

CONCLUSIONS AND RECOMMENDATIONS

Based on historical data, dissolved iron concentrations have decreased over time, and recent analytical results indicate iron no longer exceeds the NMWQCC standard at the Site. Dissolved manganese concentrations in wells MW-1 and MW-6 have remained relatively stable over the past several years, with levels in MW-6 dropping below the NMWQCC standard in April 2024. Elevated manganese concentrations appear to result from low oxygen and reducing groundwater conditions in these wells. As groundwater conditions equilibrate and dissolved oxygen increases, the environment will become more aerobic. This shift will likely cause dissolved manganese to precipitate out of solution, leading to decreased concentrations in groundwater.

Based on current and historical data gathered at the Site, Ensolum and Hilcorp recommend the following actions:

- Eliminate dissolved iron as a contaminant of concern in all wells.

Ensolum appreciates the opportunity to provide these environmental services to Hilcorp. Please contact either of the undersigned with any questions.

Sincerely,

Ensolum, LLC

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Attachments:

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	2024 Groundwater Elevation Contour Map
Figure 4	2024 Groundwater Analytical Results
Table 1	Groundwater Elevations
Table 2	Groundwater Quality Measurements
Table 3	Groundwater Analytical Results
Appendix A	Laboratory Analytical Reports

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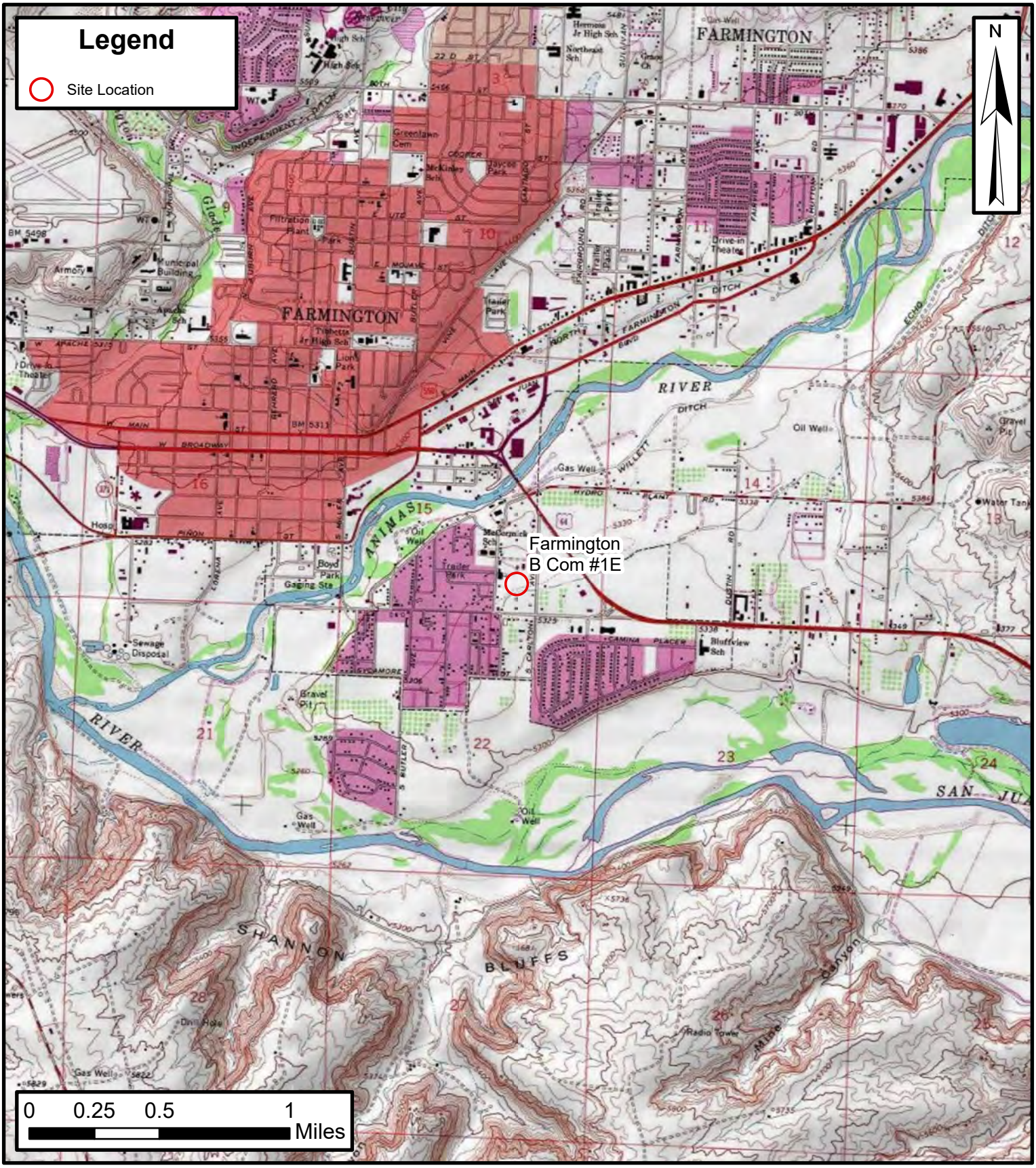
FIGURES



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Site Location Map

Farmington B Com #1E
Hilcorp Energy Company
36.72113, -108.19048
San Juan County, New Mexico

FIGURE
1

Sources: Environmental Systems Research Institute (ESRI), National Geographic Society, i-cubed

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Site Map

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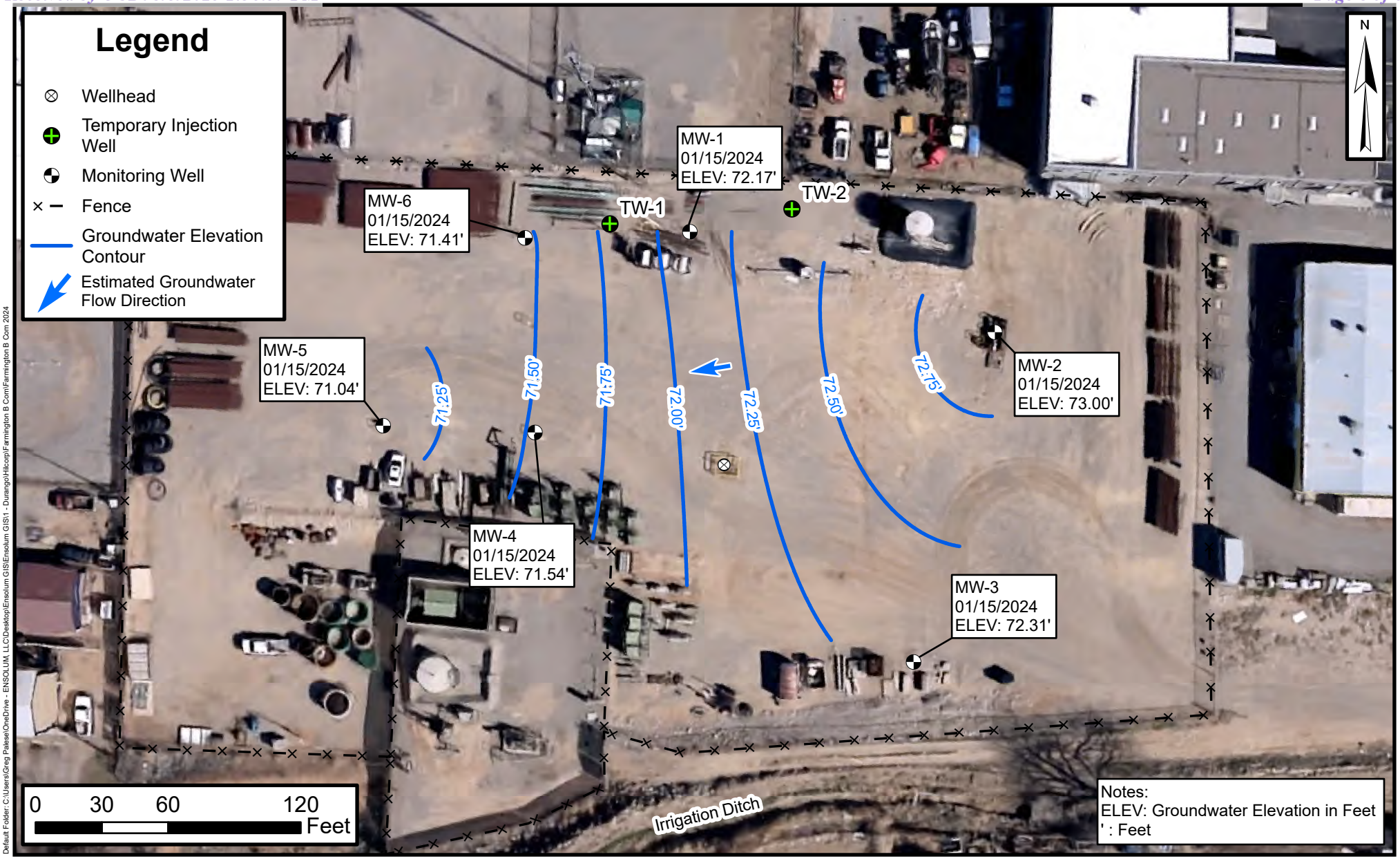
San Juan County, New Mexico

FIGURE
2

Sources: Google Earth



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Q1 2024 Groundwater Elevation Contour Map

Farmington B Com #1E
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FIGURE
3

Sources: Google Earth

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Q1 2024 Groundwater Analytical Results

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Hilcorp Energy Company
36.72113, -108.19048
San Juan County, New Mexico

FIGURE
4

Sources: Google Earth

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TABLES

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TABLE 1
GROUNDWATER ELEVATIONS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-1	101.37	5/9/2005	Sheen	28.30	--	73.07
		7/6/2005	--	26.50	--	74.87
		10/19/2005	Sheen	25.12	--	76.25
		2/16/2006	--	28.23	--	73.14
		5/15/2006	--	27.02	--	74.35
		8/2/2006	--	24.37	--	77.00
		11/14/2006	Sheen	26.48	--	74.89
		2/20/2007	Sheen	29.03	--	72.34
		5/15/2007	--	26.97	--	74.40
		8/21/2007	Sheen	25.20	--	76.17
		11/7/2007	26.10	26.30	0.20	75.23
		1/16/2008	27.88	29.24	1.36	73.22
		3/18/2008	Sheen	29.27	--	72.10
		7/24/2008	Sheen	25.73	--	75.64
		10/22/2008	Sheen	25.35	--	76.02
		1/21/2009	27.90	28.25	0.35	73.40
		4/1/2009	--	29.47	--	71.90
		6/10/2009	--	26.75	--	74.62
		10/1/2009	--	23.14	--	78.23
		12/17/2009	--	26.31	--	75.06
		3/29/2010	28.68	28.71	0.03	72.68
		6/11/2010	Sheen	25.98	--	75.39
		9/24/2010	Sheen	25.26	--	76.11
		2/7/2011	Sheen	28.83	--	72.54
		3/18/2011	29.71	29.73	0.02	71.66
		6/20/2011	Sheen	27.00	--	74.37
		9/30/2011	Sheen	24.32	--	77.05
		12/15/2011	Sheen	26.90	--	74.47
		9/21/2012	Sheen	24.52	--	76.85
		4/4/2013	Sheen	29.74	--	71.63
		9/30/2013	Sheen	24.92	--	76.45
		9/26/2014	Sheen	25.92	--	75.45
		12/18/2014	--	27.81	--	73.56
		1/28/2015	Sheen	28.87	--	72.50
		6/18/2015	--	27.33	--	74.04
		9/23/2015	--	26.52	--	74.85
		12/3/2015	--	27.85	--	73.52
		3/28/2016	--	30.13	--	71.24
		6/22/2016	--	29.53	--	71.84
		9/6/2016	--	26.71	--	74.66
		11/28/2016	--	27.85	--	73.52
		3/6/2017	--	30.16	--	71.21
		6/12/2017	--	28.00	--	73.37
		10/27/2017	--	26.49	--	74.88
		12/6/2017	--	27.41	--	73.96
		3/13/2018	--	30.13	--	71.24
		6/28/2018	--	26.35	--	75.02
		9/6/2018	--	25.60	--	75.77

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Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-1	101.37	12/19/2018	--	26.85	--	74.52
		3/5/2019	--	28.93	--	72.44
		5/21/2019	--	27.94	--	73.43
		8/26/2019	--	26.58	--	74.79
		10/30/2019	--	26.42	--	74.95
		1/29/2020	--	28.98	--	72.39
		4/21/2020	--	29.19	--	72.18
		7/16/2020	--	25.28	--	76.09
		10/1/2020	--	25.00	--	76.37
		1/6/2021	--	27.71	--	73.66
		4/9/2021	--	29.80	--	71.57
		9/23/2021	--	26.50	--	74.87
		12/2/2021	--	27.25	--	74.12
		1/28/2022	--	28.90	--	72.47
		4/21/2022	--	29.27	--	72.10
		7/26/2022	--	26.64	--	74.73
		10/26/2022	--	27.29	--	74.08
		1/30/2023	--	29.55	--	71.82
		6/12/2023	--	28.43	--	72.94
		7/19/2023	--	28.45	--	72.92
		10/16/2023	--	27.07	--	74.30
		1/15/2024	--	29.20	--	72.17
MW-2	101.57	5/9/2005	--	27.28	--	74.29
		7/6/2005	--	25.52	--	76.05
		10/19/2005	--	24.30	--	77.27
		2/16/2006	--	27.38	--	74.19
		5/15/2006	--	25.62	--	75.95
		8/2/2006	--	23.51	--	78.06
		11/14/2006	--	26.08	--	75.49
		2/20/2007	--	28.13	--	73.44
		5/15/2007	--	25.86	--	75.71
		8/21/2007	--	24.45	--	77.12
		11/7/2007	--	25.31	--	76.26
		1/16/2008	--	27.27	--	74.30
		3/18/2008	--	28.68	--	72.89
		7/24/2008	--	24.77	--	76.80
		10/22/2008	--	24.55	--	77.02
		1/21/2009	--	27.23	--	74.34
		4/1/2009	--	28.76	--	72.81
		6/10/2009	--	25.76	--	75.81
		10/1/2009	--	22.22	--	79.35
		12/17/2009	--	25.62	--	75.95
		3/29/2010	--	27.96	--	73.61
		6/11/2010	--	24.99	--	76.58
		9/24/2010	--	24.54	--	77.03
		2/7/2011	--	28.22	--	73.35
		3/18/2011	--	29.14	--	72.43

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Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-2	101.57	6/20/2011	--	26.20	--	75.37
		9/30/2011	--	23.51	--	78.06
		12/15/2011	--	26.22	--	75.35
		9/21/2012	--	23.81	--	77.76
		4/4/2013	--	29.16	--	72.41
		9/30/2013	--	24.29	--	77.28
		9/26/2014	--	25.18	--	76.39
		12/18/2014	--	27.18	--	74.39
		1/28/2015	--	NM	--	--
		6/18/2015	--	27.73	--	73.84
		9/23/2015	--	25.74	--	75.83
		12/3/2015	--	27.23	--	74.34
		3/28/2016	--	29.67	--	71.90
		6/22/2016	--	27.20	--	74.37
		9/6/2016	--	25.96	--	75.61
		11/28/2016	--	27.20	--	74.37
		3/6/2017	--	29.45	--	72.12
		6/12/2017	--	27.11	--	74.46
		10/27/2017	--	25.81	--	75.76
		12/6/2017	--	26.79	--	74.78
		3/13/2018	--	29.53	--	72.04
		6/28/2018	--	25.45	--	76.12
		9/6/2018	--	24.79	--	76.78
		12/19/2018	--	26.21	--	75.36
		3/5/2019	--	28.35	--	73.22
		5/24/2019	--	27.07	--	74.50
		8/26/2019	--	25.79	--	75.78
		10/30/2019	--	25.70	--	75.87
		1/29/2020	--	28.39	--	73.18
		4/22/2020	--	27.89	--	73.68
		7/17/2020	--	24.48	--	77.09
		10/2/2020	--	24.37	--	77.20
		1/7/2021	--	27.08	--	74.49
		4/9/2021	--	29.09	--	72.48
		9/23/2021	--	25.30	--	76.27
		12/2/2021	--	26.59	--	74.98
		1/28/2022	--	28.30	--	73.27
		4/21/2022	--	28.19	--	73.38
		7/26/2022	--	25.76	--	75.81
		10/26/2022	--	26.53	--	75.04
		1/30/2023	--	28.93	--	72.64
		6/12/2023	--	29.27	--	72.30
		7/19/2023	--	27.58	--	73.99
		10/16/2023	--	26.26	--	75.31
		1/15/2024	--	28.57	--	73.00
MW-3	102.1	5/9/2005	--	27.81	--	74.29
		7/6/2005	--	26.03	--	76.07

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MW-3	102.1	10/19/2005	--	25.06	--	77.04
		2/16/2006	--	28.57	--	73.53
		5/15/2006	--	26.15	--	75.95
		8/2/2006	--	23.83	--	78.27
		11/14/2006	--	26.75	--	75.35
		2/20/2007	--	29.31	--	72.79
		5/15/2007	--	26.23	--	75.87
		8/21/2007	--	25.00	--	77.10
		11/7/2007	--	26.12	--	75.98
		1/16/2008	--	28.46	--	73.64
		3/18/2008	--	29.97	--	72.13
		7/24/2008	--	25.27	--	76.83
		10/22/2008	--	25.35	--	76.75
		1/21/2009	--	28.56	--	73.54
		4/1/2009	--	30.20	--	71.90
		6/10/2009	--	26.55	--	75.55
		10/1/2009	--	23.00	--	79.10
		12/17/2009	--	26.86	--	75.24
		3/29/2010	--	29.41	--	72.69
		6/11/2010	--	25.62	--	76.48
		9/24/2010	--	25.23	--	76.87
		2/7/2011	--	29.47	--	72.63
		3/18/2011	--	30.40	--	71.70
		6/20/2011	--	26.83	--	75.27
		9/30/2011	--	23.95	--	78.15
		12/15/2011	--	27.41	--	74.69
		9/21/2012	--	24.55	--	77.55
		4/4/2013	--	30.52	--	71.58
		9/30/2013	--	25.27	--	76.83
		9/26/2014	--	25.91	--	76.19
		12/18/2014	--	28.30	--	73.80
		1/28/2015	--	NM	--	--
		6/18/2015	--	27.53	--	74.57
		9/23/2015	--	26.33	--	75.77
		12/3/2015	--	28.33	--	73.77
		3/28/2016	--	30.99	--	71.11
		6/22/2016	--	27.88	--	74.22
		9/6/2016	--	26.66	--	75.44
		11/28/2016	--	28.32	--	73.78
		3/6/2017	--	30.78	--	71.32
		6/12/2017	--	27.71	--	74.39
		10/27/2017	--	26.66	--	75.44
		12/6/2017	--	27.89	--	74.21
		3/13/2018	--	30.79	--	71.31
		6/28/2018	--	25.68	--	76.42
		9/6/2018	--	25.55	--	76.55
		12/19/2018	--	27.36	--	74.74

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MW-3	102.1	3/5/2019	--	28.60	--	73.50
		5/21/2019	--	27.75	--	74.35
		8/26/2019	--	26.24	--	75.86
		10/30/2019	--	26.38	--	75.72
		1/29/2020	--	29.58	--	72.52
		4/22/2020	--	27.96	--	74.14
		7/17/2020	--	24.75	--	77.35
		10/2/2020	--	24.96	--	77.14
		1/7/2021	--	28.22	--	73.88
		4/9/2021	--	29.73	--	72.37
		9/22/2021	--	26.00	--	76.10
		12/2/2021	--	27.67	--	74.43
		1/28/2022	--	29.54	--	72.56
		4/21/2022	--	28.58	--	73.52
		7/26/2022	--	26.15	--	75.95
		10/26/2022	--	27.37	--	74.73
		1/30/2023	--	30.19	--	71.91
		6/12/2023	--	29.2	--	72.90
		7/19/2023	--	28.23	--	73.87
		10/16/2023	--	26.98	--	75.12
		1/15/2024	--	29.79	--	72.31
MW-4	101.4	5/9/2005	--	28.73	--	72.67
		7/6/2005	--	26.66	--	74.74
		10/19/2005	--	25.62	--	75.78
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		11/14/2006	--	27.02	--	74.38
		2/20/2007	--	29.61	--	71.79
		5/15/2007	--	27.25	--	74.15
		8/21/2007	--	25.56	--	75.84
		11/7/2007	--	26.50	--	74.90
		1/16/2008	--	28.55	--	72.85
		3/18/2008	--	29.99	--	71.41
		7/24/2008	--	26.02	--	75.38
		10/22/2008	--	25.84	--	75.56
		1/21/2009	--	28.69	--	72.71
		4/1/2009	--	30.22	--	71.18
		6/10/2009	--	27.31	--	74.09
		10/1/2009	--	23.80	--	77.60
		12/17/2009	--	27.07	--	74.33
		3/29/2010	--	29.51	--	71.89
		6/11/2010	--	26.43	--	74.97
		9/24/2010	--	25.70	--	75.70
		2/7/2011	--	29.49	--	71.91
		3/18/2011	--	30.38	--	71.02
		6/20/2011	--	27.34	--	74.06

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-4	101.4	9/30/2011	--	24.68	--	76.72
		12/15/2011	--	27.58	--	73.82
		9/21/2012	--	25.01	--	76.39
		4/4/2013	--	30.46	--	70.94
		9/30/2013	--	25.55	--	75.85
		9/26/2014	--	26.27	--	75.13
		12/18/2014	--	28.38	--	73.02
		1/28/2015	--	NM	--	--
		6/18/2015	--	26.60	--	74.80
		9/23/2015	--	26.77	--	74.63
		12/3/2015	--	28.41	--	72.99
		3/28/2016	--	30.82	--	70.58
		6/22/2016	--	28.38	--	73.02
		9/6/2016	--	27.03	--	74.37
		11/28/2016	--	28.43	--	72.97
		3/6/2017	--	30.75	--	70.65
		6/12/2017	--	28.36	--	73.04
		10/27/2017	--	26.88	--	74.52
		12/6/2017	--	27.95	--	73.45
		3/13/2018	--	30.78	--	70.62
		6/28/2018	--	26.46	--	74.94
		9/6/2018	--	26.03	--	75.37
		12/19/2018	--	27.51	--	73.89
		3/5/2019	--	29.59	--	71.81
		5/24/2019	--	28.35	--	73.05
		8/26/2019	--	26.81	--	74.59
		10/29/2019	--	26.55	--	74.85
		1/28/2020	--	29.58	--	71.82
		4/21/2020	--	29.53	--	71.87
		7/16/2020	--	25.46	--	75.94
		10/1/2020	--	25.37	--	76.03
		1/6/2021	--	28.32	--	73.08
		4/8/2021	--	30.51	--	70.89
		9/23/2021	--	26.00	--	75.40
		12/1/2021	--	27.81	--	73.59
		1/27/2022	--	29.14	--	72.26
		4/21/2022	--	29.6	--	71.80
		7/26/2022	--	26.84	--	74.56
		10/26/2022	--	27.76	--	73.64
		1/30/2023	--	30.22	--	71.18
		6/12/2023	--	29.73	--	71.67
		7/19/2023	--	28.88	--	72.52
		10/16/2023	--	27.47	--	73.93
		1/15/2024	--	29.86	--	71.54
MW-5	100.52	5/9/2005	--	28.50	--	72.02
		7/6/2005	--	26.32	--	74.20
		10/19/2005	--	25.30	--	75.22

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-5	100.52	2/16/2006	--	28.62	--	71.90
		5/15/2006	--	26.55	--	73.97
		8/2/2006	--	24.23	--	76.29
		11/14/2006	--	27.67	--	72.85
		2/20/2007	--	29.34	--	71.18
		5/15/2007	--	27.04	--	73.48
		8/21/2007	--	25.21	--	75.31
		11/7/2007	--	26.13	--	74.39
		1/16/2008	--	28.18	--	72.34
		3/18/2008	--	29.65	--	70.87
		7/24/2008	--	25.73	--	74.79
		10/22/2008	--	25.49	--	75.03
		1/21/2009	--	28.38	--	72.14
		4/1/2009	--	29.92	--	70.60
		6/10/2009	--	27.09	--	73.43
		10/1/2009	--	23.50	--	77.02
		12/17/2009	--	26.77	--	73.75
		3/29/2010	--	29.21	--	71.31
		6/11/2010	--	26.16	--	74.36
		9/24/2010	--	25.31	--	75.21
		2/7/2011	--	29.13	--	71.39
		3/18/2011	--	30.10	--	70.42
		6/20/2011	--	27.03	--	73.49
		9/30/2011	--	24.35	--	76.17
		12/15/2011	--	27.25	--	73.27
		9/21/2012	--	24.65	--	75.87
		4/4/2013	--	30.10	--	70.42
		9/30/2013	--	25.16	--	75.36
		9/26/2014	--	25.88	--	74.64
		12/18/2014	--	27.98	--	72.54
		1/28/2015	--	NM	--	--
		6/18/2015	--	NM	--	--
		9/23/2015	--	26.41	--	74.11
		12/3/2015	--	28.00	--	72.52
		3/28/2016	--	30.41	--	70.11
		6/22/2016	--	28.03	--	72.49
		9/6/2016	--	22.66	--	77.86
		11/28/2016	--	28.03	--	72.49
		3/6/2017	--	30.39	--	70.13
		6/12/2017	--	28.06	--	72.46
		10/27/2017	--	26.50	--	74.02
		12/6/2017	--	27.58	--	72.94
		3/13/2018	--	30.40	--	70.12
		6/28/2018	--	26.13	--	74.39
		9/6/2018	--	25.68	--	74.84
		12/19/2018	--	27.15	--	73.37
		3/5/2019	--	29.2	--	71.32

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-5	100.52	5/24/2019	--	28.04	--	72.48
		8/26/2019	--	26.47	--	74.05
		10/29/2019	--	26.27	--	74.25
		1/28/2020	--	29.18	--	71.34
		4/21/2020	--	29.36	--	71.16
		7/16/2020	--	25.12	--	75.40
		10/1/2020	--	24.96	--	75.56
		1/6/2021	--	27.96	--	72.56
		4/8/2021	--	30.16	--	70.36
		9/23/2021	--	27.50	--	73.02
		12/1/2021	--	27.43	--	73.09
		1/27/2022	--	29.52	--	71.00
		4/21/2022	--	29.42	--	71.10
		7/26/2022	--	26.53	--	73.99
		10/26/2022	--	27.42	--	73.10
		1/30/2023	--	29.86	--	70.66
		6/12/2023	--	29.47	--	71.05
		7/19/2023	--	28.58	--	71.94
		10/16/2023	--	27.14	--	73.38
		1/15/2024	--	29.48	--	71.04
MW-6	102.14	5/9/2005	--	29.94	--	72.20
		7/6/2005	--	27.89	--	74.25
		10/19/2005	--	26.70	--	75.44
		2/16/2006	--	29.85	--	72.29
		5/15/2006	--	28.11	--	74.03
		8/2/2006	--	25.83	--	76.31
		11/14/2006	--	27.91	--	74.23
		2/20/2007	--	30.52	--	71.62
		5/15/2007	--	28.61	--	73.53
		8/21/2007	--	26.67	--	75.47
		11/7/2007	--	27.52	--	74.62
		1/16/2008	--	29.43	--	72.71
		3/18/2008	--	30.85	--	71.29
		7/24/2008	--	27.26	--	74.88
		10/22/2008	--	26.85	--	75.29
		1/21/2009	--	29.52	--	72.62
		4/1/2009	--	31.00	--	71.14
		6/10/2009	--	28.44	--	73.70
		10/1/2009	--	24.75	--	77.39
		12/17/2009	--	27.90	--	74.24
		3/29/2010	--	30.29	--	71.85
		6/11/2010	--	27.58	--	74.56
		9/24/2010	--	26.74	--	75.40
		2/7/2011	--	30.35	--	71.79
		3/18/2011	--	31.21	--	70.93
		6/20/2011	--	28.50	--	73.64
		9/30/2011	--	25.85	--	76.29

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)
MW-6	102.14	12/15/2011	--	28.41	--	73.73
		9/21/2012	--	26.03	--	76.11
		4/4/2013	--	31.24	--	70.90
		9/30/2013	--	25.43	--	76.71
		9/26/2014	--	27.38	--	74.76
		12/18/2014	--	29.28	--	72.86
		1/28/2015	--	30.33	--	71.81
		6/18/2015	--	28.73	--	73.41
		9/23/2015	--	27.91	--	74.23
		12/3/2015	--	29.31	--	72.83
		3/28/2016	--	31.52	--	70.62
		6/22/2016	--	28.00	--	74.14
		9/6/2016	--	28.21	--	73.93
		11/28/2016	--	29.33	--	72.81
		3/6/2017	--	31.54	--	70.60
		6/12/2017	--	29.55	--	72.59
		10/27/2017	--	27.92	--	74.22
		12/6/2017	--	28.87	--	73.27
		3/13/2018	--	31.59	--	70.55
		6/28/2018	--	27.8	--	74.34
		9/6/2018	--	27.12	--	75.02
		12/19/2018	--	28.36	--	73.78
		3/5/2019	--	30.39	--	71.75
		5/21/2019	--	29.51	--	72.63
		8/26/2019	--	28.00	--	74.14
		10/29/2019	--	27.73	--	74.41
		1/29/2020	--	30.46	--	71.68
		4/21/2020	--	30.85	--	71.29
		7/16/2020	--	26.73	--	75.41
		10/1/2020	--	26.45	--	75.69
		1/6/2021	--	29.19	--	72.95
		4/8/2021	--	31.38	--	70.76
		9/23/2021	--	26.00	--	76.14
MW-6	102.14	12/1/2021	--	28.70	--	73.44
		1/28/2022	--	30.37	--	71.77
		4/21/2022	--	30.89	--	71.25
		7/26/2022	--	28.26	--	73.88
		10/26/2022	--	28.80	--	73.34
		1/30/2023	--	31.04	--	71.10
		6/12/2023	--	30.88	--	71.26
		7/19/2023	--	30.02	--	72.12
		10/16/2023	--	28.60	--	73.54
		1/15/2024	--	30.73	--	71.41

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Top of Casing Elevation (1)	Sample Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Adjusted Groundwater Elevation (2)

Notes:

(1): surface elevation based on an arbitrary datum of 100 feet

(2): groundwater elevation is adjusted using a density correction factor of 0.8 when product is present

bgs: below ground surface

BTOC: below top of casing

NM: Not measured

ENSOLUM

TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-1	9/26/2014	18.30	7.17	0.824	1,268	1.60	-198.0	3.50
	12/18/2014	18.93	12.95	10.310	15,860	25.02	-166.1	2.00
	1/28/2015	18.78	11.91	4.202	6,495	10.54	-36.4	1.75
	6/18/2015	17.81	9.44	13.390	21,782	1.34	42.0	3.25
	9/23/2015	17.97	7.90	3.224	4,960	1.41	-127.6	2.50
	12/3/2015	17.97	7.92	1.311	2,016	2.45	-200.0	2.25
	3/28/2016	18.35	7.35	0.800	1,190	3.77	-101.0	2.00
	6/22/2016	16.70	7.30	--	2,620	0.50	-176.1	2.25
	9/7/2016	17.54	6.65	2.083	3,205	1.10	-127.8	3.50
	3/6/2017	15.98	8.72	1.564	2,398	0.86	-247.1	2.00
	6/12/2017	15.98	7.76	3.880	5,967	1.27	-103.8	2.75
	10/27/2017	18.65	7.22	0.783	1,273	5.27	-125.9	3.75
	12/6/2017	17.04	6.92	2.783	1,202	1.21	55.6	3.25
	3/13/2018	17.41	7.25	--	1,109	-0.05*	-125.4	1.80
	6/28/2018	17.65	7.03	--	1,593	1.07	-109.6	3.75
	9/6/2018	18.50	7.40	--	2,248	1.60	-116.7	4.00
	3/5/2019	16.90	7.46	--	1,090	--	-22.5	--
	5/21/2019	16.90	7.19	0.550	1,100	--	-19.8	2.75
	8/26/2019	21.70	7.13	0.640	1,270	--	-17.8	3.50
	10/30/2019	--	6.31	0.710	1,290	--	12.1	3.50
	1/29/2020	13.00	6.60	0.510	1,050	20.17*	-14.3	--
	4/21/2020	17.50	6.33	0.580	1,160	1.66	7.1	--
	7/16/2020	22.20	6.23	1.120	2,230	0.76	7.8	--
	10/1/2020	22.00	6.39	0.740	1,450	1.70	7.3	4.33
	1/6/2021	15.20	6.41	0.570	1,140	2.61	5.4	3.00
	4/9/2021	14.40	6.58	0.530	1,020	2.49	-0.3	2.00
	9/23/2021	20.00	7.00	--	3,040	--	--	2.46
	12/2/2021	14.30	6.39	--	1,040	--	--	3.25
	1/28/2022	10.80	6.63	--	940	--	--	2.50
	4/21/2022	18.60	6.35	0.490	990	--	--	2.25
	7/26/2022	19.50	6.27	0.640	1,280	--	--	3.50
	10/26/2022	18.50	6.61	0.480	950	--	--	3.00
	1/30/2023	14.80	6.99	0.440	890	--	--	2.00
	6/12/2023	18.70	6.86	0.400	790	--	--	2.50
	7/19/2023	34.28	7.52	0.760	1,163	1.12	-92.1	--
	10/16/2023	27.11	7.56	0.950	1,463.7	1.38	-93.2	3.25
	1/15/2024	9.02	7.79	0.580	883.7	2.02	-103.5	2.25
MW-2	9/23/2015	18.01	7.11	0.782	1,204	2.86	0.9	3.50
	9/7/2016	17.45	6.95	0.703	1,081	3.89	5.7	4.00
	3/13/2018	17.86	7.23	--	1,046	2.50	48.5	1.80
	6/28/2018	17.19	7.02	--	1,142	3.47	45.1	4.50
	9/6/2018	23.70	7.30	--	1,199	2.63	-7.4	5.00
	3/5/2019	--	--	--	--	--	--	--
	5/21/2019	--	--	--	--	--	--	--
	8/26/2019	--	--	--	--	--	--	--
	10/30/2019	16.20	6.38	0.550	1,100	--	-28.5	4.25
	1/29/2020	14.90	6.55	0.590	1,180	13.5*	-30.5	--
	4/22/2020	15.10	6.52	0.500	1,010	3.09	-18.1	--
	7/17/2020	18.80	6.52	0.650	1,320	2.87	-11.6	--
	10/2/2020	15.50	6.54	0.550	1,090	4.64	-20.4	4.91
	1/7/2021	13.10	6.76	0.560	1,100	2.11	-19.5	3.59
	4/9/2021	15.70	6.43	0.470	950	3.01	-29.9	2.50
	9/23/2021	22.10	7.04	--	3,310	--	--	4.14
	12/2/2021	15.90	6.49	--	1,040	--	--	4.00
	1/28/2022	12.20	6.48	--	960	--	--	3.00
	4/21/2022	18.20	6.55	0.450	900	--	--	2.00
	7/26/2022	19.40	6.34	0.510	1,020	--	--	4.25
	10/26/2022	18.20	6.78	0.490	980	--	--	3.50
	1/30/2023	14.70	6.93	0.440	880	--	--	2.25
	6/12/2023	18.00	6.84	0.460	920	--	--	2.25
	7/19/2023	37.27	7.49	0.720	1,104	5.02	56.5	--
	10/16/2023	26.65	7.59	0.820	1,262.4	3.27	-56.2	3.50
	1/15/2024	7.81	7.78	0.890	1,367.6	4.18	20.4	2.50

ENSOLUM

TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-3	9/23/2015	17.49	7.28	0.787	1,211	9.40	-45.2	3.25
	9/7/2016	16.37	6.81	0.673	1,035	3.54	17.5	3.50
	11/28/2016	16.68	7.92	--	1,072	4.09	62.3	3.50
	3/6/2017	15.38	7.65	0.782	1,202	3.26	-117.1	1.50
	6/12/2017	14.88	7.33	0.612	943	4.51	-95.6	3.00
	10/27/2017	17.27	7.37	--	800	6.11	35.0	3.75
	12/6/2017	16.08	7.01	0.596	918	3.42	-56.9	3.00
	3/13/2018	16.97	7.21	--	1,034	0.06	35.9	1.50
	6/28/2018	18.39	7.53	--	676	3.88	47.0	4.25
	9/6/2018	18.17	8.14	--	583	2.84	6.6	4.25
	3/5/2019	NA	7.47	0.530	1,050	NA	-24.6	--
	5/21/2019	16.30	7.25	0.310	560	--	-28.1	3.00
	8/26/2019	21.50	7.46	0.500	1,000	--	-28.7	3.75
	10/30/2019	17.40	6.60	0.990	990	--	-45.1	3.75
	1/29/2020	13.00	6.78	0.500	1,000	15.04*	-42.5	--
	4/22/2020	17.10	6.57	0.550	1,090	3.63	-23.3	--
	7/17/2020	18.60	6.85	0.300	600	2.97	-53.7	--
	10/2/2020	14.80	6.91	0.290	580	5.57	-44.0	4.44
	1/7/2021	14.10	6.70	0.360	720	2.29	-37.2	2.84
	4/9/2021	17.70	6.71	0.540	1,070	2.22	-29.2	2.00
	9/22/2021	18.60	7.00	--	1,148	--	--	3.30
	12/2/2021	16.20	6.59	--	850	--	--	3.00
	1/28/2022	14.10	6.77	--	940	--	--	2.00
	4/21/2022	17.90	6.60	0.450	890	--	--	2.75
	7/26/2022	18.10	6.83	0.380	760	--	--	4.00
	10/26/2022	15.90	6.44	0.420	840	--	--	2.50
	1/30/2023	16.90	6.88	0.450	900	--	--	1.25
	6/12/2023	17.70	6.60	0.440	900	--	--	1.75
	7/19/2023	31.11	7.42	0.690	1,057	4.37	131.7	--
	10/16/2023	32.00	7.55	0.710	1,092.9	3.89	231.1	2.75
	1/15/2024	12.56	7.75	0.800	1,231.8	3.82	40.2	1.50
MW-4	9/23/2015	17.73	7.52	0.411	632	10.50	-18.5	3.25
	9/7/2016	16.75	6.80	0.693	1,066	3.59	14.9	2.50
	11/28/2016	16.93	7.32	--	1,003	3.11	113.1	2.00
	3/13/2018	17.12	7.24	--	985	2.19	52.4	0.68
	6/28/2018	19.87	7.07	--	1,098	3.62	61.6	3.00
	9/6/2018	18.26	7.49	--	1,007	2.94	44.0	4.00
	3/5/2019	--	--	--	--	--	--	--
	5/21/2019	--	--	--	--	--	--	--
	8/26/2019	--	--	--	--	--	--	--
	10/30/2019	15.90	6.44	0.630	1,250	--	-24.6	2.75
	1/28/2020	14.30	6.63	0.530	1,050	11.56*	-25.7	--
	4/21/2020	18.30	6.28	0.540	1,080	4.51	-20.5	--
	7/16/2020	21.40	6.51	0.640	1,280	2.76	-19.9	--
	10/1/2020	17.90	6.61	0.510	1,020	4.82	-30.0	3.37
	1/6/2021	12.90	6.37	0.500	980	3.21	-21.5	1.93
	4/8/2021	17.70	6.41	0.520	1,030	6.72	-21.0	0.75
	9/23/2021	19.50	6.99	--	3,320	--	--	3.75
	12/1/2021	15.90	6.54	--	1,100	--	--	2.25
	1/27/2022	12.50	6.42	--	1,080	--	--	1.50
	4/21/2022	18.60	6.72	0.460	910	--	--	0.50
	7/26/2022	19.10	6.29	0.510	1,010	--	--	2.75
	10/26/2022	17.10	6.52	0.540	1,080	--	--	1.75
	1/30/2023	17.40	6.74	0.440	890	--	--	0.25
	6/12/2023	20.00	6.62	0.400	810	--	--	0.75
	7/19/2023	32.34	7.31	0.740	1,136	3.60	127.2	--
	10/16/2023	32.44	7.44	0.790	1,216.5	3.58	185.8	2.00
	1/15/2024	10.99	7.71	0.660	1,016.6	2.57	61.6	0.75
MW-5	9/23/2015	18.12	7.04	0.892	1,373	6.29	-109.5	2.75
	9/7/2016	16.82	6.90	0.931	1,433	6.49	41.1	4.50
	11/28/2016	17.58	7.37	--	1,141	6.64	104.1	2.00
	3/13/2018	16.60	7.23	--	1,033	1.80	51.1	0.81
	6/8/2018	16.38	7.12	--	1,097	6.17	70.5	3.00

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-5	9/6/2018	17.90	7.28	--	1,023	7.28	51.6	3.25
	3/5/2019	--	--	--	--	--	--	--
	5/21/2019	--	--	--	--	--	--	--
	8/26/2019	--	--	--	--	--	--	--
	10/30/2019	14.70	6.78	0.880	1,460	--	-26.3	2.75
	1/28/2020	12.50	6.92	0.520	1,080	6.61	-28.6	--
	4/21/2020	16.20	6.20	0.530	1,070	4.80	-25.0	--
	7/16/2020	20.70	6.40	0.650	1,320	4.34	-23.3	--
	10/1/2020	16.60	6.64	0.500	1,060	5.89	-37.6	3.48
	1/6/2021	11.80	6.63	0.460	880	6.28	-38.1	2.01
	4/8/2021	14.30	6.40	0.570	1,180	2.42	-25.1	1.00
	9/23/2021	18.10	7.01	--	3,350	--	--	3.00
	12/1/2021	15.90	6.55	--	1,040	--	--	2.25
	1/27/2022	15.30	6.37	--	1,000	--	--	1.00
	4/21/2022	18.60	6.94	0.460	910	--	--	1.50
	7/26/2022	18.80	6.35	0.470	980	--	--	2.75
	10/26/2022	17.10	6.80	0.510	1,020	--	--	2.25
	1/30/2023	16.60	6.90	0.460	920	--	--	1.00
	6/12/2023	18.70	6.68	0.400	800	--	--	1.25
	7/19/2023	33.54	7.47	0.690	1,068	5.14	149.4	--
	10/16/2023	30.25	7.63	0.020	26.57	5.72	216.9	2.50
	1/15/2024	11.16	7.73	0.510	780.12	4.89	92.0	1.25
MW-6	9/26/2014	17.65	7.22	0.712	1,096	1.38	-39.5	2.75
	12/18/2014	18.31	7.87	0.985	1,515	1.99	-161.7	2.25
	1/28/2015	17.73	7.52	0.868	1,335	4.17	-122.1	1.50
	6/18/2015	17.09	8.18	1.194	1,836	1.81	-89.5	2.50
	9/23/2015	17.98	8.10	1.014	1,559	2.45	-73.5	3.00
	12/3/2015	18.04	8.06	0.931	1,433	4.07	-177.6	2.25
	3/28/2016	18.05	7.04	0.600	1,000	5.16	-9.0	1.25
	6/22/2016	17.00	7.38	--	1,060	1.63	1.8	3.00
	9/7/2016	16.94	7.03	0.777	1,196	2.46	8.5	2.50
	11/28/2016	17.79	9.12	--	3,150	3.50	115.9	2.00
	3/6/2017	15.90	7.42	0.810	1,247	1.53	-160.6	1.50
	6/12/2017	15.22	7.42	0.763	1,174	2.56	-116.3	2.00
	10/27/2017	17.98	7.21	--	1,196	3.06	74.1	3.00
	12/6/2017	16.64	7.09	0.851	1,307	2.53	-63.8	2.50
	3/13/2018	17.05	7.23	--	1,043	0.15	14.6	1.14
	6/28/2018	17.56	7.08	--	1,198	1.28	60.1	3.00
	9/6/2018	18.06	7.43	--	1,395	1.31	51.6	3.50
	3/5/2019	14.20	7.56	--	1,370	--	-24.4	--
	5/21/2019	14.30	7.26	0.500	1,010	--	-29.6	2.00
	8/26/2019	19.10	7.05	0.580	1,170	--	-25.2	2.75
	10/29/2019	17.70	6.47	0.630	1,300	--	-25.6	3.00
	1/29/2020	12.20	6.80	0.540	1,070	6.75	-26.2	--
	4/21/2020	18.80	6.55	0.580	1,180	3.10	-20.0	--
	7/16/2020	22.30	6.37	0.770	1,550	2.17	-11.6	--
	10/1/2020	19.20	6.78	0.730	1,460	3.69	-22.2	3.64
	1/6/2021	12.20	6.57	0.530	1,080	2.44	-26.2	2.30
	4/8/2021	18.90	6.64	0.500	1,000	1.62	-17.4	1.25
	9/23/2021	19.00	7.10	--	2,780	--	--	2.93
	12/1/2021	16.90	6.65	--	1,030	--	--	2.50
	1/28/2022	9.10	6.80	--	950	--	--	1.75
	4/21/2022	Insufficient water volume to sample						
	7/26/2022	19.40	6.38	0.480	960	--	--	2.75
	10/26/2022	17.50	6.66	0.460	910	--	--	2.50
	1/30/2023	16.20	6.85	0.450	890	--	--	1.25
	6/12/2023	18.70	6.75	0.450	900	--	--	1.25
	7/19/2023	33.19	7.44	0.770	1,181	2.22	155.8	--
	10/16/2023	27.53	8.01	0.010	1,503	2.31	239.1	2.50
MW-6	1/15/2024	9.26	7.76	0.780	1,195	2.53	-0.6	1.50
TMW-1	12/3/2015	17.12	8.23	2.072	3,188	7.40	-205.6	--
TMW-2	12/3/2015	17.54	9.40	5.043	7,761	2.47	-231.2	--

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)

Notes:

°C: degrees Celcius
DO: dissolved oxygen
g/L: grams per liter
uS/cm: microsiemens per centimeter
mg/L: milligrams per liter
mV: millivolts
ORP: oxidation-reduction potential
TDS: total dissolved solids
--: data not collected

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-1	2/19/1998	(orig)	--	--
	12/29/1998	(orig)	--	--
	5/9/2005	(orig)	--	--
	10/19/2005	(orig)	--	--
	11/14/2006	(orig)	--	--
	11/7/2007	(orig)	--	--
	7/24/2008	(orig)	--	--
	7/24/2008	(Duplicate)	--	--
	10/22/2008	(orig)	--	--
	10/22/2008	(Duplicate)	--	--
	1/21/2009	Free Product - Not Sampled		
	4/1/2009	(orig)	--	--
	6/10/2009	(orig)	--	--
	10/1/2009	(orig)	0.233	--
	12/17/2009	(orig)	0.521	--
	3/29/2010	(orig)	0.0803	--
	6/11/2010	(orig)	0.0217	--
	9/24/2010	(orig)	0.0285	--
	2/7/2011	(orig)	--	**0.459**
	3/18/2011	(orig)	< 0.02	**0.477**
	6/20/2011	(orig)	0.157	**0.424**
	6/20/2011	(Duplicate)	--	--
	9/30/2011	(orig)	**4.1**	**0.268**
	9/30/2011	(Duplicate)	--	--
	12/15/2011	(orig)	**1.91**	**0.35**
	12/15/2011	(Duplicate)	--	--
	9/21/2012	(orig)	**2.9**	**0.27**
	4/4/2013	(orig)	**1.8**	**0.47**
	9/30/2013	(orig)	**1.7**	**0.29**
	9/26/2014	(orig)	**2.3**	**0.34**
	11/5/2014	CHEMICAL OXIDATION INJECTION EVENT		
	12/18/2014	(orig)	0.0805	< 0.005
	1/28/2015	(orig)	< 0.050	< 0.005

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-1	3/17/2015	CHEMICAL OXIDATION - 2nd INJECTION		
	6/18/2015	(orig)	< 0.5	< 0.05
	6/18/2015	(Duplicate)	< 0.5	< 0.05
	9/23/2015	(orig)	< 0.05	< 0.005
	9/23/2015	(Duplicate)	< 0.05	< 0.005
	12/3/2015	(orig)	0.678	**0.568**
	12/3/2015	(Duplicate)	0.776	**0.597**
	3/28/2016	(orig)	--	**0.454**
	3/28/2016	(Duplicate)	--	**0.445**
	6/22/2016	(orig)	**16.2**	**1.72**
	9/7/2016	(orig)	**7.66**	**1.63**
	9/7/2016	(Duplicate)	**10.2**	**1.77**
	10/18/2016	CHEMICAL OXIDATION - 3rd INJECTION		
	3/6/2017	(orig)	<0.05	0.022
	6/12/2017	(orig)	0.662	**0.839**
	10/27/2017	(orig)	**6.69**	**1.15**
	12/06/2017	(orig)	**4.89**	**1.02**
	3/13/2018	(orig)	**3.44**	**0.961**
	6/28/2018	(orig)	**8.15**	**1.14**
	9/6/2018	(orig)	**9.04**	**3.76**
	12/19/2018	(orig)	<0.10	**0.86**
	3/5/2019	(orig)	<0.10	**1.07**
	5/21/2019	(orig)	<0.10	**1.02**
	8/26/2019	(orig)	<0.10	**1.07**
	10/30/2019	(orig)	<0.10	**1.01**
	1/29/2020	(orig)	<0.10	**1.14**
	4/21/2020	(orig)	<0.10	**1.20**
	Q3	Invalid Sample due to laboratory complications		
	10/1/2020	(orig)	0.11	**2.91**
	1/6/2021	(orig)	<0.10	**1.10**
	4/9/2021	(orig)	<0.10	**1.00**
	9/23/2021	(orig)	**5.5**	**1.1**
	12/2/2021	(orig)	0.22	**0.72**

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-1	1/28/2022	(orig)	<0.020	**0.66**
	4/21/2022	(orig)	**1.1**	**0.72**
	7/26/2022	(orig)	**2.7**	**1.2**
	10/26/2022	(orig)	**2.5**	**0.76**
	1/30/2023	(orig)	0.75	**0.56**
	6/12/2023	(orig)	<0.020	0.0022
	7/19/2023	(orig)	0.42	**0.61**
	10/16/2023	(orig)	0.43	**0.87**
	1/15/2024	(orig)	<0.020	**0.63**
	4/30/2024	(orig)	<0.020	**0.53**
MW-2	4/4/2013	(orig)	< 0.05	0.046
	9/30/2013	(orig)	< 0.05	0.0077
	9/23/2015	(orig)	< 0.05	< 0.005
	9/7/2016	(orig)	< 0.05	< 0.005
	3/13/2018	(orig)	< 0.05	0.0167
	6/28/2018	(orig)	< 0.05	< 0.005
	9/6/2018	(orig)	< 0.05	< 0.005
	12/19/2018	(orig)	< 0.10	< 0.010
	10/30/2019	(orig)	< 0.10	< 0.010
	1/29/2020	(orig)	< 0.10	< 0.010
	4/21/2020	(orig)	< 0.10	< 0.010
	Q3	**Invalid Sample due to laboratory complications**		
	10/2/2020	(orig)	< 0.10	< 0.010
	1/7/2021	(orig)	< 0.10	< 0.010
	4/9/2021	(orig)	< 0.020	0.013
	9/22/2021	(orig)	< 0.020	0.0026
	12/2/2021	(orig)	< 0.020	< 0.0020
	1/28/2022	(orig)	< 0.020	0.0030
	4/21/2022	(orig)	< 0.020	< 0.0020
	7/26/2022	(orig)	<0.020	<0.0020
	10/26/2022	(orig)	<0.020	<0.0020
	1/30/2023	(orig)	<0.020	0.0063
	6/12/2023	(orig)	0.084	**0.60**

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-2	7/19/2023	(orig)	0.029	<0.0020
	10/16/2023	(orig)	<0.020	<0.0020
	1/15/2024	(orig)	<0.020	<0.0020
	4/30/2024	(orig)	<0.020	<0.0020
MW-3	12/15/2011	(orig)	0.246	0.112
	4/4/2013	(orig)	0.34	**0.28**
	9/30/2013	(orig)	< 0.05	0.047
	9/23/2015	(orig)	< 0.05	0.121
	9/7/2016	(orig)	< 0.05	**0.85**
	11/28/2016	(orig)	0.218	0.0959
	3/6/2017	(orig)	0.149	**0.211**
	6/12/2017	(orig)	0.0726	0.0604
	10/27/2017	(orig)	< 0.05	0.136
	12/06/2017	(orig)	< 0.05	0.0361
	3/13/2018	(orig)	< 0.05	0.084
	6/18/2018	(orig)	< 0.05	0.0336
	6/6/2018	(orig)	< 0.05	0.143
	12/19/2018	(orig)	< 0.10	0.157
	3/5/2019	(orig)	< 0.10	0.0341
	5/21/2019	(orig)	< 0.10	<0.01
	8/26/2019	(orig)	< 0.10	**0.249**
	10/30/2019	(orig)	< 0.10	0.145
	1/29/2020	(orig)	< 0.10	0.066
	4/21/2020	(orig)	< 0.10	0.0156
	Q3	**Invalid Sample due to laboratory complications**		
	10/2/2020	(orig)	<0.10	0.041
	1/7/2021	(orig)	<0.10	0.0243
	4/9/2021	(orig)	< 0.020	0.016
	9/22/2021	(orig)	< 0.020	0.13
	12/2/2021	(orig)	< 0.020	0.065
	1/28/2022	(orig)	0.029	0.0065
	4/21/2022	(orig)	< 0.020	0.038
	7/26/2022	(orig)	<0.020	0.11

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			**1.0**	**0.20**
MW-3	10/26/2022	(orig)	0.023	**0.35**
	1/30/2023	(orig)	<0.020	0.0036
	6/12/2023	(orig)	0.062	0.037
	7/19/2023	(orig)	<0.020	0.04
	10/16/2023	(orig)	<0.020	0.15
	1/15/2024	(orig)	<0.020	0.012
	4/30/2024	(orig)	<0.020	0.065
MW-4	4/4/2013	(orig)	< 0.05	0.069
	9/30/2013	(orig)	< 0.05	< 0.005
	9/23/2015	(orig)	< 0.05	< 0.005
	9/7/2016	(orig)	< 0.05	0.0094
	11/28/2016	(orig)	< 0.05	0.0066
	3/13/2018	(orig)	< 0.05	0.0063
	6/28/2018	(orig)	< 0.05	< 0.005
	9/6/2018	(orig)	< 0.05	< 0.005
	12/19/2018	(orig)	< 0.10	< 0.010
	10/29/2019	(orig)	< 0.10	< 0.010
	1/29/2020	(orig)	< 0.10	< 0.010
	4/21/2020	(orig)	< 0.10	< 0.010
	Q3	**Invalid Sample due to laboratory complications**		
	10/2/2020	(orig)	<0.10	<0.010
	1/6/2021	(orig)	<0.10	<0.010
	4/8/2021	(orig)	<0.020	<0.0020
	9/23/2021	(orig)	<0.020	<0.0020
	12/1/2021	(orig)	<0.020	<0.0020
	1/27/2022	(orig)	<0.020	<0.0020
	4/21/2022	(orig)	<0.020	<0.0020
	7/26/2022	(orig)	0.026	<0.0020
	10/26/2022	(orig)	<0.020	<0.0020
	1/30/2023	(orig)	0.085	0.0048
	6/12/2023	(orig)	0.25	0.018
	7/19/2023	(orig)	<0.020	<0.0020
	10/16/2023	(orig)	<0.020	<0.0020

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-4	1/15/2024	(orig)	<0.020	<0.0020
	4/30/2024	(orig)	<0.020	<0.0020
MW-5	4/4/2013	(orig)	< 0.05	< 0.005
	4/4/2013	(Duplicate)	0.62	0.025
	9/30/2013	(orig)	< 0.05	< 0.005
	9/23/2015	(orig)	< 0.05	< 0.005
	9/7/2016	(orig)	< 0.05	< 0.005
	11/28/2016	(orig)	0.186	0.0083
	03/13/2018	(orig)	0.0668	< 0.05
	6/28/2018	(orig)	< 0.05	< 0.005
	9/6/2018	(orig)	< 0.05	< 0.005
	12/19/2018	(orig)	< 0.10	< 0.010
	10/29/2019	(orig)	< 0.10	< 0.010
	1/29/2020	(orig)	< 0.10	< 0.010
	4/21/2020	(orig)	< 0.10	< 0.010
	Q3	Invalid Sample due to laboratory complications		
	10/1/2020	(orig)	<0.10	0.0131
	1/6/2021	(orig)	<0.10	<0.01
	4/8/2021	(orig)	<0.020	<0.002
	9/23/2021	(orig)	<0.020	0.0037
	12/1/2021	(orig)	<0.020	<0.0020
	1/27/2022	(orig)	<0.020	<0.0020
	4/21/2022	(orig)	<0.020	<0.0020
	7/26/2022	(orig)	<0.020	<0.0020
	10/26/2022	(orig)	<0.020	<0.0020
	1/30/2023	(orig)	<0.020	<0.0020
	6/12/2023	(orig)	0.025	<0.0020
	7/19/2023	(orig)	<0.020	<0.0020
	10/16/2023	(orig)	<0.020	<0.0020
	1/15/2024	(orig)	<0.020	<0.0020
	4/30/2024	(orig)	<0.020	<0.0020
MW-6	9/15/1998	(orig)	--	--
	12/29/1998	(orig)	--	--

ENSOLUM

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-6	3/3/1999	(orig)	--	--
	6/15/1999	(orig)	--	--
	9/15/1999	(orig)	--	--
	12/14/1999	(orig)	--	--
	1/22/2004	(orig)	--	--
	5/9/2005	(orig)	--	--
	10/19/2005	(orig)	--	--
	11/14/2006	(orig)	--	--
	11/7/2007	(orig)	--	--
	7/24/2008	(orig)	--	--
	10/22/2008	(orig)	--	--
	1/21/2009	(orig)	--	--
	4/1/2009	(orig)	--	--
	6/10/2009	(orig)	--	--
	10/1/2009	(orig)	< 0.02	--
	12/17/2009	(orig)	0.0511	--
	3/29/2010	(orig)	< 0.0200	--
	6/11/2010	(orig)	< 0.0200	--
	9/24/2010	(orig)	< 0.0200	--
	2/7/2011	(orig)	--	**0.543**
	3/18/2011	(orig)	< 0.02	0.0679
	6/20/2011	(orig)	< 0.1	**0.43**
	9/30/2011	(orig)	< 0.05	0.0261
	12/15/2011	(orig)	0.429	**1.06**
	9/21/2012	(orig)	< 0.05	0.058
	9/21/2012	(Duplicate)	< 0.06	0.055
	4/4/2013	(orig)	0.056	**0.33**
	9/30/2013	(orig)	< 0.05	0.17
	9/30/2013	(Duplicate)	< 0.05	0.17
	9/26/2014	(orig)	0.24	**0.44**
	9/26/2014	(Duplicate)	0.27	**0.41**
	11/5/2014	CHEMICAL OXIDATION INJECTION EVENT		
	12/18/2014	(orig)	**1.33**	**0.268**

ENSOLUM

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-6	12/18/2014	(Duplicate)	**1.11**	**0.255**
	1/28/2015	(orig)	< 0.05	**0.402**
	3/17/2015	CHEMICAL OXIDATION - 2nd INJECTION		
	6/18/2015	(orig)	0.0636	**0.0225**
	9/23/2015	(orig)	< 0.05	0.0152
	12/3/2015	(orig)	0.0709	0.194
	3/28/2016	(orig)	--	**0.456**
	6/22/2016	(orig)	< 0.05	**0.463**
	9/7/2016	(orig)	< 0.05	**0.409**
	10/18/2016	CHEMICAL OXIDATION - 3rd INJECTION		
	11/28/2016	(orig)	< 0.05	0.0051
	3/6/2017	(orig)	0.0598	**0.428**
	6/12/2017	(orig)	0.0543	0.0618
	10/27/2017	(orig)	< 0.05	**0.218**
	12/06/2017	(orig)	< 0.05	**0.311**
	3/13/2018	(orig)	< 0.05	**0.925**
	6/28/2018	(orig)	< 0.05	**0.973**
	9/6/2018	(orig)	< 0.05	**0.848**
	12/19/2018	(orig)	< 0.10	**0.306**
	3/05/2019	(orig)	< 0.10	**0.617**
	5/21/2019	(orig)	< 0.10	**0.420**
	8/26/2019	(orig)	< 0.10	**0.357**
	10/29/2019	(orig)	< 0.10	**0.211**
	1/29/2020	(orig)	< 0.10	**0.524**
	4/21/2020	(orig)	< 0.10	**0.556**
	Q3	Invalid Sample due to laboratory complications		
	10/1/2020	(orig)	<0.10	<0.010
	1/6/2021	(orig)	< 0.10	**0.438**
	4/8/2021	(orig)	< 0.020	**0.51**
	9/22/2021	(orig)	< 0.020	**0.53**
	12/1/2021	(orig)	< 0.020	**0.80**
	1/28/2022	(orig)	< 0.020	**0.69**
	4/21/2022	Insufficient water volume to sample		

ENSOLUM

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Farmington B Com #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			1.0	0.20
MW-6	7/26/2022	(orig)	< 0.020	**0.94**
	10/26/2022	(orig)	< 0.020	**0.85**
	1/30/2023	(orig)	<0.020	**0.73**
	6/12/2023	(orig)	<0.020	**0.32**
	7/19/2023	(orig)	<0.020	**0.40**
	10/16/2023	(orig)	<0.020	**0.68**
	1/15/2024	(orig)	<0.020	**0.81**
	4/30/2024	(orig)	<0.020	0.13

Notes:

mg/L: milligrams per liter

ND: not detected, practical quantitation limit unknown

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

<0.037: indicates result less than the stated laboratory reporting limit (PQL)

*Concentrations in **bold** and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code*

ENSOLUM

APPENDIX A

Laboratory Analytical Reports

eurofins | Environment Testing

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

February 03, 2024

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Farmington B Com No 1E OrderNo.: 2401844

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 6 sample(s) on 1/20/2024 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401844**
Date Reported: **2/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-1
Project: Farmington B Com No 1E **Collection Date:** 1/15/2024 3:45:00 PM
Lab ID: 2401844-001 **Matrix:** AQUEOUS **Received Date:** 1/20/2024 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	1/25/2024 4:48:12 PM
Manganese	0.63	0.0020	*	mg/L	1	1/25/2024 4:48:12 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2401844**
Date Reported: **2/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-2
Project: Farmington B Com No 1E
Collection Date: 1/15/2024 4:00:00 PM
Lab ID: 2401844-002 **Matrix:** AQUEOUS **Received Date:** 1/20/2024 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	1/25/2024 4:55:25 PM
Manganese	ND	0.0020		mg/L	1	1/25/2024 4:55:25 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2401844**
Date Reported: **2/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-3
Project: Farmington B Com No 1E **Collection Date:** 1/15/2024 2:30:00 PM
Lab ID: 2401844-003 **Matrix:** AQUEOUS **Received Date:** 1/20/2024 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	1/25/2024 5:02:13 PM
Manganese	0.012	0.0020		mg/L	1	1/25/2024 5:02:13 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2401844**
Date Reported: **2/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-4
Project: Farmington B Com No 1E
Collection Date: 1/15/2024 2:55:00 PM
Lab ID: 2401844-004 **Matrix:** AQUEOUS **Received Date:** 1/20/2024 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	1/25/2024 5:09:28 PM
Manganese	ND	0.0020		mg/L	1	1/25/2024 5:09:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2401844**
Date Reported: **2/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-5
Project: Farmington B Com No 1E **Collection Date:** 1/15/2024 3:15:00 PM
Lab ID: 2401844-005 **Matrix:** AQUEOUS **Received Date:** 1/20/2024 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	1/25/2024 5:29:00 PM
Manganese	ND	0.0020		mg/L	1	1/25/2024 5:29:00 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2401844**
Date Reported: **2/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-6
Project: Farmington B Com No 1E
Collection Date: 1/15/2024 3:30:00 PM
Lab ID: 2401844-006 **Matrix:** AQUEOUS **Received Date:** 1/20/2024 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	1/25/2024 5:35:49 PM
Manganese	0.81	0.0020	*	mg/L	1	1/25/2024 5:35:49 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401844**

03-Feb-24

Client: HILCORP ENERGY

Project: Farmington B Com No 1E

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B102671**	RunNo: **102671**
Prep Date:	Analysis Date: **1/25/2024**	SeqNo: **3793034** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Manganese	ND	0.0020								

Sample ID: **LCSLL-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B102671**	RunNo: **102671**
Prep Date:	Analysis Date: **1/25/2024**	SeqNo: **3793035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020	0.02000	0	98.6	50	150			
Manganese	ND	0.0020	0.002000	0	98.4	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B102671**	RunNo: **102671**
Prep Date:	Analysis Date: **1/25/2024**	SeqNo: **3793036** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			

Qualifiers:

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

eurofins | Environment Testing

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

Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2401844 RcptNo: 1

Received By: Cheyenne Cason 1/20/2024 8:05:00 AM

Completed By: Cheyenne Cason 1/20/2024 8:34:48 AM

Reviewed By: 1/22/24

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples not frozen
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preserved added to bottles? Yes ☑ No ☐ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ HNO3 NA ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)

Adjusted? YES

Checked by: CM 1/22/24

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

Poured off and Filered from unpreserved volume for all samples (Lot # 1866106) and added ~0.4mls HNO3 (Chem # 7342) to all samples - CM 1/22/24

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-0.4	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

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:

X Standard ☐ Rush_____

Project Name:

Farmington B-Com No 1E

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No Voag.

# of Coolers: 1

Cooler Temp(including CF): 0.4 -0 = -0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2401844	Analysis Request: Dissolved Mn and Fe
1-15	1545	Water	MW-1	500 ml Plastic	Cool	001	X
	1600	Water	MW-2	500 ml Plastic	Cool	002	X
	1430	Water	MW-3	500 ml Plastic	Cool	003	X
	1455	Water	MW-4	500 ml Plastic	Cool	004	X
	1515	Water	MW-5	500 ml Plastic	Cool	005	X
	1530	Water	MW-6	500 ml Plastic	Cool	006	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
1-19	1710				1/19/24	1710
1/19/24	1750				11/20/24	0805

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.
Special pricing, see Andy.
samples not frozen cmc 11/20/24

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.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/14/2024 11:38:15 AM

JOB DESCRIPTION

Farmington B-Com No 1E

JOB NUMBER

885-3845-1

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
5/14/2024 11:38:15 AM

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

Client: Hilcorp Energy
Project/Site: Farmington B-Com No 1E

Laboratory Job ID: 885-3845-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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: Farmington B-Com No 1E

Job ID: 885-3845-1

Job ID: 885-3845-1 Eurofins Albuquerque

Job Narrative
885-3845-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt
The samples were received on 5/2/2024 7:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.3°C.

Metals
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
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-1
Lab Sample ID: 885-3845-1
Date Collected: 04/30/24 12:25
Matrix: Water
Date Received: 05/02/24 07:20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.53**		0.0020		mg/L			05/14/24 05:16	1
Iron	ND		0.020		mg/L			05/14/24 05:16	1

Client Sample Results

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-2
Lab Sample ID: 885-3845-2
Date Collected: 04/30/24 12:50
Matrix: Water
Date Received: 05/02/24 07:20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0020		mg/L			05/14/24 05:19	1
Iron	ND		0.020		mg/L			05/14/24 05:19	1

Client Sample Results

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-3
Lab Sample ID: 885-3845-3
Date Collected: 04/30/24 10:30
Matrix: Water
Date Received: 05/02/24 07:20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.065**		0.0020		mg/L			05/14/24 05:21	1
Iron	ND		0.020		mg/L			05/14/24 05:21	1

Client Sample Results

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-4
Lab Sample ID: 885-3845-4
Date Collected: 04/30/24 10:55
Matrix: Water
Date Received: 05/02/24 07:20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0020		mg/L			05/14/24 05:23	1
Iron	ND		0.020		mg/L			05/14/24 05:23	1

Client Sample Results

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-5
Lab Sample ID: 885-3845-5
Date Collected: 04/30/24 11:15
Matrix: Water
Date Received: 05/02/24 07:20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0020		mg/L			05/14/24 05:25	1
Iron	ND		0.020		mg/L			05/14/24 05:25	1

Client Sample Results

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-6
Lab Sample ID: 885-3845-6
Date Collected: 04/30/24 11:45
Matrix: Water
Date Received: 05/02/24 07:20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.13**		0.0020		mg/L			05/14/24 05:39	1
Iron	ND		0.020		mg/L			05/14/24 05:39	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Farmington B-Com No 1E

Job ID: 885-3845-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 885-4909/17
Matrix: Water
Analysis Batch: 4909

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0020		mg/L			05/14/24 05:10	1
Iron	ND		0.020		mg/L			05/14/24 05:10	1

Lab Sample ID: LCS 885-4909/19
Matrix: Water
Analysis Batch: 4909

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Manganese			0.500	0.524		mg/L		105	85 - 115		
Iron			0.500	0.510		mg/L		102	85 - 115		

Lab Sample ID: LLCS 885-4909/18
Matrix: Water
Analysis Batch: 4909

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

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Manganese			0.00200	0.00198	J	mg/L		99	50 - 150		
Iron			0.0200	0.0154	J	mg/L		77	50 - 150		

Lab Sample ID: MRL 885-4909/14
Matrix: Water
Analysis Batch: 4909

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Manganese			0.00200	0.00196	J	mg/L		98	50 - 150		
Iron			0.0200	0.0202	J	mg/L		101	50 - 150		

Lab Sample ID: 885-3845-5 MS
Matrix: Water
Analysis Batch: 4909

Client Sample ID: MW-5
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Manganese	ND		0.500	0.495		mg/L		99	70 - 130		
Iron	ND		0.500	0.497		mg/L		99	70 - 130		

Lab Sample ID: 885-3845-5 MSD
Matrix: Water
Analysis Batch: 4909

Client Sample ID: MW-5
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Manganese	ND		0.500	0.506		mg/L		101	70 - 130	2	20
Iron	ND		0.500	0.491		mg/L		98	70 - 130	1	20

Lab Sample ID: 885-3845-6 MS
Matrix: Water
Analysis Batch: 4909

Client Sample ID: MW-6
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Manganese	0.13		0.500	0.629		mg/L		100	70 - 130		
Iron	ND		0.500	0.501		mg/L		100	70 - 130		

QC Sample Results

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: 885-3845-6 MSD
Client Sample ID: MW-6
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 4909

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Manganese	0.13		0.500	0.625		mg/L		99	70 - 130	1	20
Iron	ND		0.500	0.491		mg/L		98	70 - 130	2	20

QC Association Summary

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Metals

Filtration Batch: 4345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3845-1	MW-1	Dissolved	Water	Filtration	
885-3845-2	MW-2	Dissolved	Water	Filtration	
885-3845-3	MW-3	Dissolved	Water	Filtration	
885-3845-4	MW-4	Dissolved	Water	Filtration	
885-3845-5	MW-5	Dissolved	Water	Filtration	
885-3845-6	MW-6	Dissolved	Water	Filtration	
885-3845-5 MS	MW-5	Dissolved	Water	Filtration	
885-3845-5 MSD	MW-5	Dissolved	Water	Filtration	
885-3845-6 MS	MW-6	Dissolved	Water	Filtration	
885-3845-6 MSD	MW-6	Dissolved	Water	Filtration	

Analysis Batch: 4909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3845-1	MW-1	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-2	MW-2	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-3	MW-3	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-4	MW-4	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-5	MW-5	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-6	MW-6	Dissolved	Water	200.7 Rev 4.4	4345
MB 885-4909/17	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 885-4909/19	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LLCS 885-4909/18	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
MRL 885-4909/14	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
885-3845-5 MS	MW-5	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-5 MSD	MW-5	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-6 MS	MW-6	Dissolved	Water	200.7 Rev 4.4	4345
885-3845-6 MSD	MW-6	Dissolved	Water	200.7 Rev 4.4	4345

Lab Chronicle

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

Client Sample ID: MW-1
Lab Sample ID: 885-3845-1
Date Collected: 04/30/24 12:25
Matrix: Water
Date Received: 05/02/24 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	Filtration			4345	CC	EET ALB	05/03/24 12:02
Dissolved	Analysis	200.7 Rev 4.4		1	4909	VP	EET ALB	05/14/24 05:16

Client Sample ID: MW-2
Lab Sample ID: 885-3845-2
Date Collected: 04/30/24 12:50
Matrix: Water
Date Received: 05/02/24 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	Filtration			4345	CC	EET ALB	05/03/24 12:02
Dissolved	Analysis	200.7 Rev 4.4		1	4909	VP	EET ALB	05/14/24 05:19

Client Sample ID: MW-3
Lab Sample ID: 885-3845-3
Date Collected: 04/30/24 10:30
Matrix: Water
Date Received: 05/02/24 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	Filtration			4345	CC	EET ALB	05/03/24 12:02
Dissolved	Analysis	200.7 Rev 4.4		1	4909	VP	EET ALB	05/14/24 05:21

Client Sample ID: MW-4
Lab Sample ID: 885-3845-4
Date Collected: 04/30/24 10:55
Matrix: Water
Date Received: 05/02/24 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	Filtration			4345	CC	EET ALB	05/03/24 12:02
Dissolved	Analysis	200.7 Rev 4.4		1	4909	VP	EET ALB	05/14/24 05:23

Client Sample ID: MW-5
Lab Sample ID: 885-3845-5
Date Collected: 04/30/24 11:15
Matrix: Water
Date Received: 05/02/24 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	Filtration			4345	CC	EET ALB	05/03/24 12:02
Dissolved	Analysis	200.7 Rev 4.4		1	4909	VP	EET ALB	05/14/24 05:25

Client Sample ID: MW-6
Lab Sample ID: 885-3845-6
Date Collected: 04/30/24 11:45
Matrix: Water
Date Received: 05/02/24 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	Filtration			4345	CC	EET ALB	05/03/24 12:02
Dissolved	Analysis	200.7 Rev 4.4		1	4909	VP	EET ALB	05/14/24 05:39

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Job ID: 885-3845-1
Project/Site: Farmington B-Com No 1E

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
200.7 Rev 4.4		Water	Iron
200.7 Rev 4.4		Water	Manganese

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
200.7 Rev 4.4		Water	Iron
200.7 Rev 4.4		Water	Manganese

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

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:
X Standard ☐ Rush_____

Project Name:
Farmington B-Com No 1E

Project #:

Project Manager:
Mitch Killough

Sampler: Brandon Sinclair
On Ice: X Yes ☐ No marty
# of Coolers: 1
Cooler Temp(including CF): 5.3+0=5.3°c

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

885-3845 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	Dissolved Mn and Fe
4-30	1225	Water	MW-1	500 ml Plastic	Cool		X
	1250	Water	MW-2	500 ml Plastic	Cool		X
	1030	Water	MW-3	500 ml Plastic	Cool		X
	1055	Water	MW-4	500 ml Plastic	Cool		X
	1115	Water	MW-5	500 ml Plastic	Cool		X
	1145	Water	MW-6	500 ml Plastic	Cool		X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5/1/24	1700				5/1/24	1700
5/1/24	1745			courier	5/2/24	7:20

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.
Special pricing, see Andy.

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: 885-3845-1

Login Number: 3845 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Dominguez, Desiree

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 438246
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2024 Annual Groundwater Monitoring Report for Farmington B Com #1E: content satisfactory 1. Iron (Fe) may be suspended as a constituent of concern for future groundwater sampling events as at least eight (8) consecutive quarters have demonstrated to be below the WQCC standards for domestic water supply. 2. Continue to sample for Manganese for future sampling events. 3. Submit the 2025 groundwater annual report to the OCD, no later than April 1, 2026.	4/23/2025