REVIEWED
By Mike Buchanan at 2:44 pm, May 29, 2024

Review of the 2023 Annual Groundwater Monitoring Report for Flora Vista #1: Content Satisfactory
1. Continue groundwater monitoring for all wells, including for constituents iron and manganese. Sampling frequency may be reduced to semi-annual basis. 2. All COCs except for Mn may be suspended from sampling analysis from MW-2. 3. Continue to conduct sample analysis for iron in MW-3 4. Groundwater sampling for wells DW-1 and DW-2 may be suspended
5. If wells continue to convey too low volume of groundwater for sample collection, Hilcorp may try purging the three casing volumes first, return after 24 hours, then collect the sample.
6 Submit the 2024 Annual Groundwater Report by April 2025.

ENSOLUM

March 25, 2024

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

Re: 2023 Annual Groundwater Monitoring Report
Flora Vista #1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: nCS1907338841
NMOCD Administrative Order: 3R-173

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2023 Annual Groundwater Monitoring Report* to the New Mexico Oil Conservation Division (NMOCD) to document groundwater monitoring activities conducted at the Flora Vista #1 natural gas production well (Site) during 2023. The Site is located on private property in Unit Letter F, Section 22, Township 30 N, Range 12 W, of San Juan County, New Mexico (Figure 1). Currently, there are five groundwater monitoring wells (MW-1 through MW-5_ at the Site which are monitored for groundwater elevations and sampled quarterly. Two additional domestic wells (DW-1 and DW-2) have historically been sampled annually as part of Site monitoring activities. Well locations and general Site features are presented on Figure 2.

SITE BACKGROUND

Several historical releases have been documented at the Site. An earthen dehydrator pit was taken out of service in 1994 and subsequently remediated between 1994 and 1996 by a previous operator. Reports documenting these activities were submitted to the NMOCD, which issued a letter to the operator on January 24, 1997, approving pit closure and remediation. Additionally, Burlington Resources (Burlington) encountered historical petroleum hydrocarbon-impacted soil during Site construction activities in 2003. Burlington ultimately excavated 9,443 cubic yards of impacted soil in attempts to remediate the Site. Burlington was unable to remove all impacted soil from the Site and impacted soils were left in place at depth. Groundwater was encountered in the excavation at a depth of approximately 25 feet below ground surface (bgs). In order to address the remaining impacts, Burlington sprayed approximately 80 barrels (bbls) of potassium permanganate into the excavation prior to backfilling in hopes of enhancing degradation of the petroleum hydrocarbon impacts.

After completion of the excavation, monitoring well MW-1 was installed in 2003 at a down gradient location from the center of the excavation (Figure 2). Groundwater monitoring included analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), as well as total petroleum hydrocarbons (TPH), with analytical results indicating the presence of benzene and total xylenes above regulatory standards. At the request of the NMOCD, monitoring wells MW-2, MW-3, and

MW-4 were installed at the Site in August 2008. Additionally, two domestic water wells located downgradient of the Site (DW-1 and DW-2 shown on Figure 2) were included in yearly sampling events to ensure impacted groundwater was not migrating off-Site and onto adjacent properties.

Based on the presence of dissolved-phase petroleum hydrocarbons in groundwater, a mobile-dual phase extraction event was conducted in August 2013 and removed approximately 1,300 gallons of impacted groundwater. In order to assess potential soil and groundwater impacts originating from the on-Site above ground storage tanks (shown on Figure 2), monitoring well MW-5 was installed in September 2015. Groundwater analytical data from MW-5 indicated there were petroleum hydrocarbon constituents exceeding regulatory standards in this area. In order to further enhance remediation of residual petroleum hydrocarbons at the Site, GHD (former environmental consultant for the Site) conducted an in-situ chemical oxidation (ISCO) event in October of 2016. GHD injected a 15 percent (%) PersulfOx® oxidant solution into wells MW-1 and MW-5 to promote oxidation of soluble metals and petroleum hydrocarbons in groundwater. Since 2016, groundwater at the Site has been continually gauged and monitored for BTEX, dissolved iron, and dissolved manganese constituents.

SITE GROUNDWATER CLEANUP STANDARDS

The NMOCD requires groundwater quality standards be met as presented by the New Mexico Water Quality Control Commission (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 the constituents of concern (COCs) at the Site in milligrams per liter (mg/L).

- Benzene: 0.005 mg/L
- Toluene: 1.0 mg/L
- Ethylbenzene: 0.70 mg/L
- Total Xylenes: 0.62 mg/L
- Dissolved Iron: 1.0 mg/L
- Dissolved Manganese: 0.20 mg/L

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater level measurements and samples were collected in January, May, July, and October 2023 from wells MW-1 through MW-5. Groundwater level measurements were not collected from MW-1 during 2023 because of insufficient water volume in the wells and in October 2023 the well could not be located. Additionally, samples were not collected for laboratory analysis from MW-4 or MW-5 in January or May 2023 due to insufficient water volume in the wells. Domestic water wells DW-1 and DW-2 were also not sampled in 2023 due to lack of access from the landowners.

Static groundwater-level monitoring included recording depth-to-groundwater measurements of each monitoring well using a Keck oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with distilled water prior to each measurement to prevent cross-contamination. Groundwater elevations measured in monitoring wells during the 2023 sampling events are presented in Table 1 and were used to develop groundwater potentiometric surface maps (Figures 3, 4, 5, and 6). The inferred groundwater flow direction is to the south-southeast.

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, including temperature, pH, total dissolved solids, and electrical conductivity, were collected during the purging process, and are presented in Table 2.

Following well purging, groundwater samples were placed 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 with zero headspace and packed on ice to preserve samples. Samples were submitted to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico, for analysis of BTEX following United State Environmental Protection Agency (EPA) Method 8260B and dissolved manganese and dissolved iron following 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

Benzene concentrations in groundwater from well MW-5 exceeded the NMWQCC standard during the July and October 2023 sampling events. Toluene was detected in MW-3 above the NMWQCC standards in October 2023. Ethylbenzene was detected in MW-5 above the NMWQCC standards in October 2023. Additionally, total xylenes were detected above the NMWQCC at MW-5 in July and October 2023.

Dissolved iron concentrations exceeded the NMWQCC standard in wells MW-2, MW-3, MW-4 and MW-5 during one or more sampling events. Lastly, dissolved manganese concentrations exceeded NMWQCC standards in wells MW1, MW4, and MW-5 during one or more sampling events. A summary of analytical results is presented in Table 3 and depicted on Figure 7, with complete laboratory analytical reports attached as Appendix A.

CONCLUSIONS

Overall, the presence of BTEX concentrations in groundwater have decreased over time at the Site. BTEX concentrations in groundwater have not been detected above NMWQCC standards in well MW-4 since 2019. Benzene concentrations in wells MW-1 and MW-5 have been greatly reduced and have fluctuated above and below the NMWQCC standard for the last several years and MW-1 was observed to be dry throughout all of 2023. Specifically, benzene concentrations detected between February 2020 and October 2023 have ranged between 0.0036 and 0.014 mg/L in well MW-5. Data collected at the Site suggests the petroleum hydrocarbon plume is stable and overall reducing in size and magnitude through natural attenuation.

Concentrations of dissolved iron and manganese continue to be detected above NMWQCC standards in wells MW-2, MW-3 MW-4, and MW-5. Elevated dissolved iron and manganese concentrations are often a biproduct of petroleum hydrocarbon biodegradation. Biodegradation of petroleum hydrocarbons can often create anaerobic and reducing conditions in groundwater, which can result in the dissolution of iron and manganese from the surrounding soil and rock strata and consequently elevate concentrations of these inorganic constituents. Analytical data collected at the Site indicates dissolved iron and manganese are present in groundwater in the

same wells with historically elevated BTEX concentrations, demonstrating these constituents are likely related to the degradation of the petroleum hydrocarbon plume. As groundwater conditions at the Site continue to equilibrate and dissolved oxygen increases, groundwater conditions will become increasingly aerobic. As this happens, dissolved iron and manganese have the ability to precipitate out of solution leading to decreased concentrations in groundwater.

Although no access was granted in 2023 to sample domestic water wells DW-1 and DW-2 located downgradient of the Site, these wells have historically not contained detectable concentrations of COCs and only once have contained detectable concentrations of dissolved manganese but was still in compliance with the NMWQCC standard. As such, this data indicates the plume is confined to the Site and has not migrated to adjacent properties.

RECOMMENDATIONS

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

- Reduce sampling frequency to semi-annually for wells MW-1, MW-3 MW-4, and MW-5 for BTEX, dissolved iron, and dissolved manganese. Once concentrations decrease to below NMWQCC standards, sampling frequency will be increased to quarterly until eight consecutive quarters show compliance with applicable standards.
- Eliminate sampling of well MW-2 With the exception of manganese, all other constituents have been in compliance with NMWQCC standards since sampling began in 2008. Manganese concentrations have occasionally exceeded the NMWQCC standards, however this well is upgradient to the release and continued sampling of other site wells will continue to monitor for COC concentrations within the plume downgradient.
- Eliminate sampling of wells DW-1 and DW-2. Site COCs have not been present in these wells above NMWQCC standards since they were first sampled in 2009/2010, indicating the Site groundwater plume has not migrated downgradient from the release location.

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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wweichert@ensolum.com

Stuart Hyde, PG
Senior Geologist
(970) 903-1607
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Attachments:

Figure 1 Site Location Map
Figure 2 Site Map
Figure 3 Q1 2023 Groundwater Elevation Map
Figure 4 Q2 2023 Groundwater Elevation Map
Figure 5 Q3 2023 Groundwater Elevation Map
Figure 6 Q4 2023 Groundwater Elevation Map
Figure 7 2023 Annual Groundwater Analytical Results

Table 1 Groundwater Elevations
Table 2 Groundwater Quality Measurements
Table 3 Groundwater Analytical Results

Appendix A Analytical Laboratory Reports

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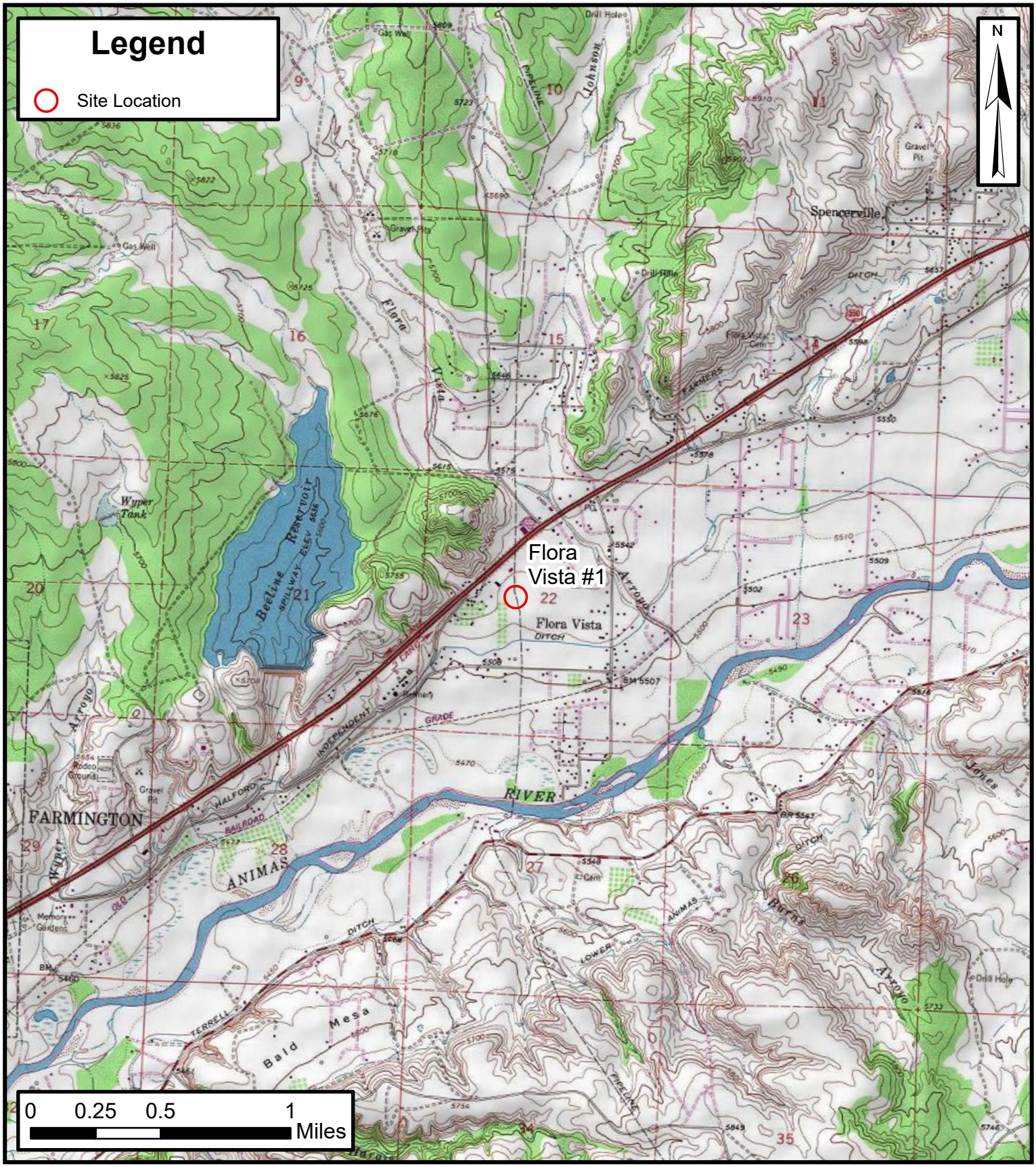
FIGURES



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Environmental, Engineering and Hydrogeologic Consultants

Site Location Map

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
1

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

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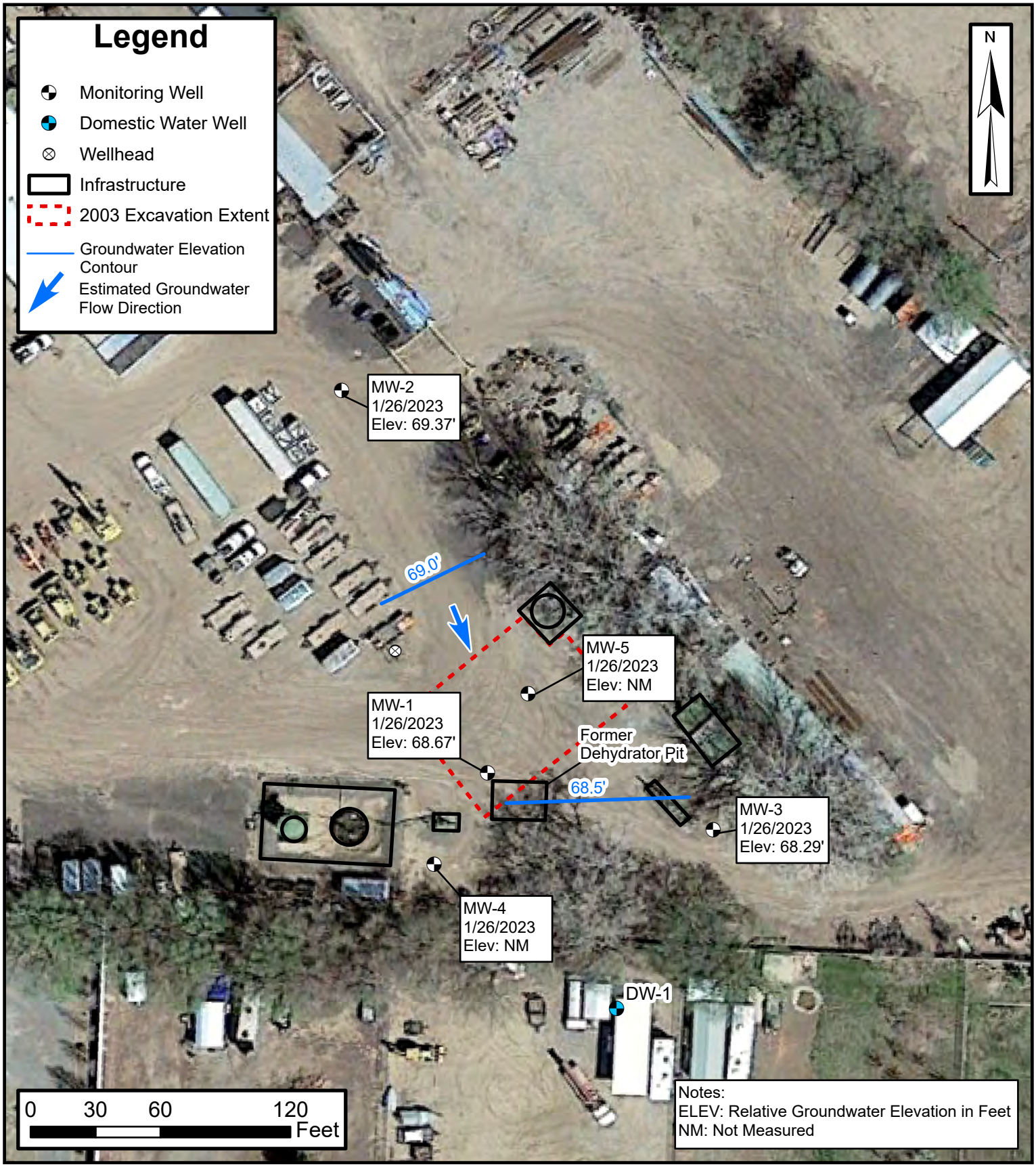
Site Map

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
2

Sources: Google Earth 2019



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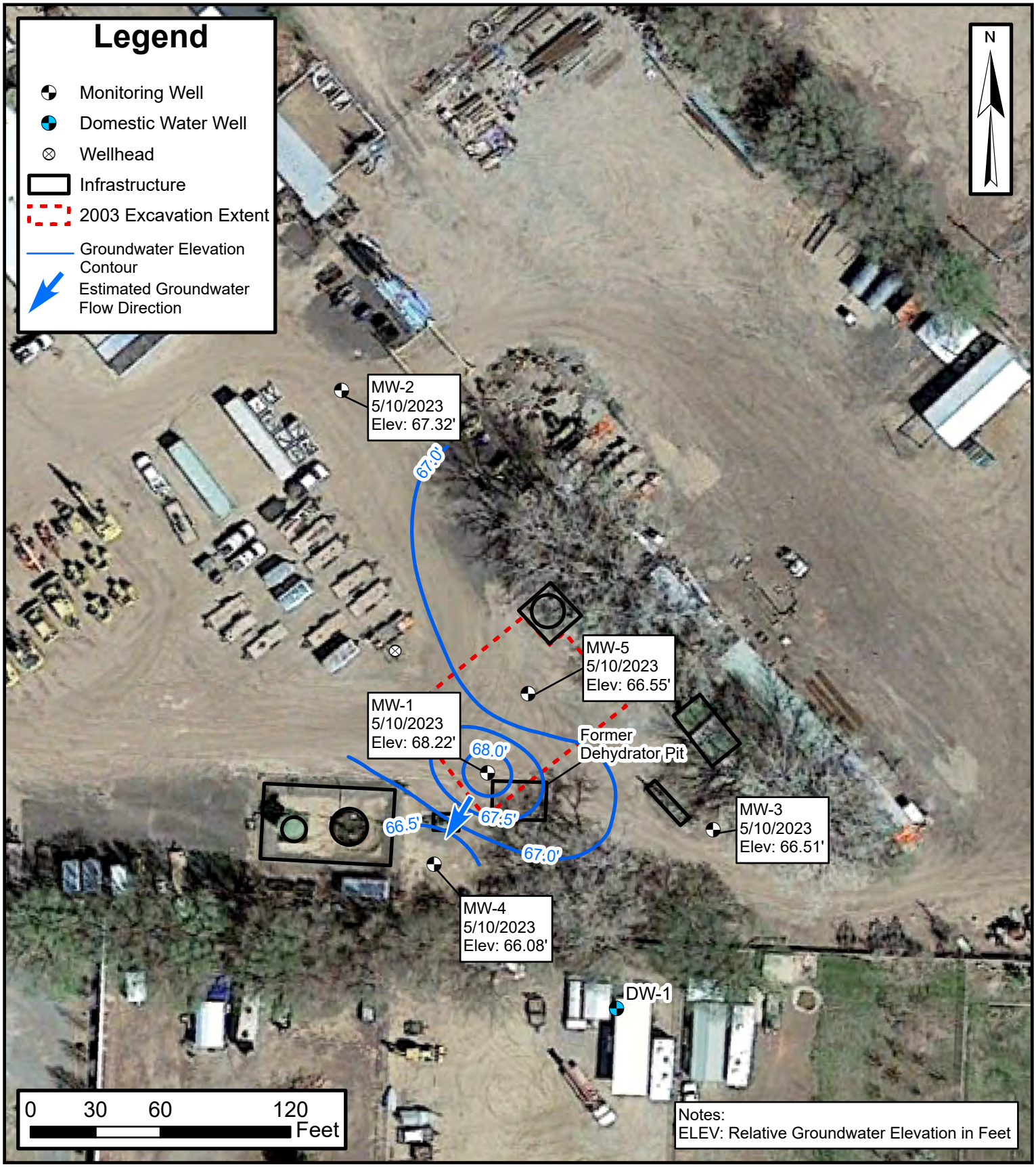
Q1 2023 Groundwater Elevation Contour Map

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
3

Sources: Google Earth 2019



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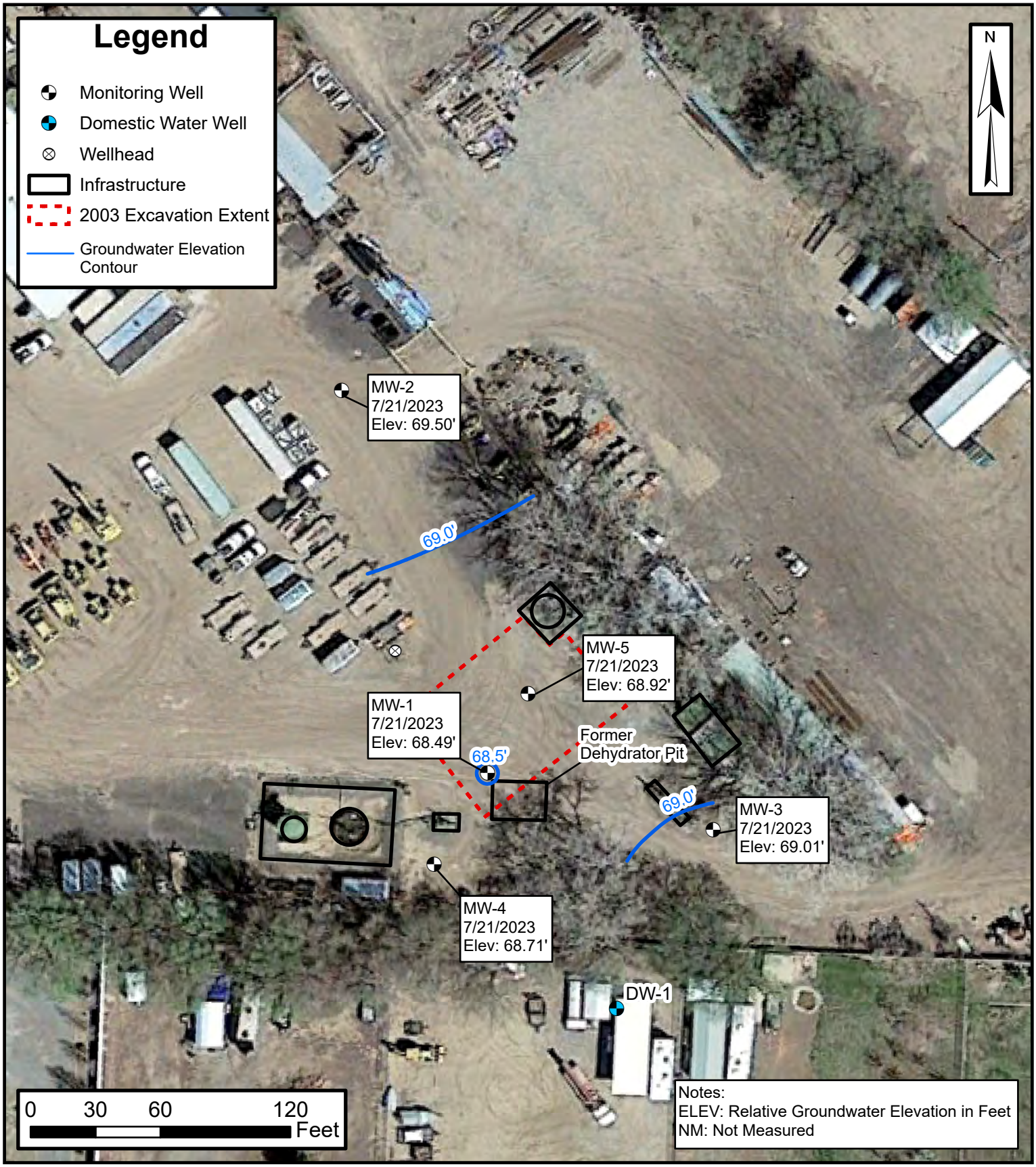
Environmental, Engineering and Hydrogeologic Consultants

Q2 2023 Groundwater Elevation Contour Map

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
4

Sources: Google Earth 2019



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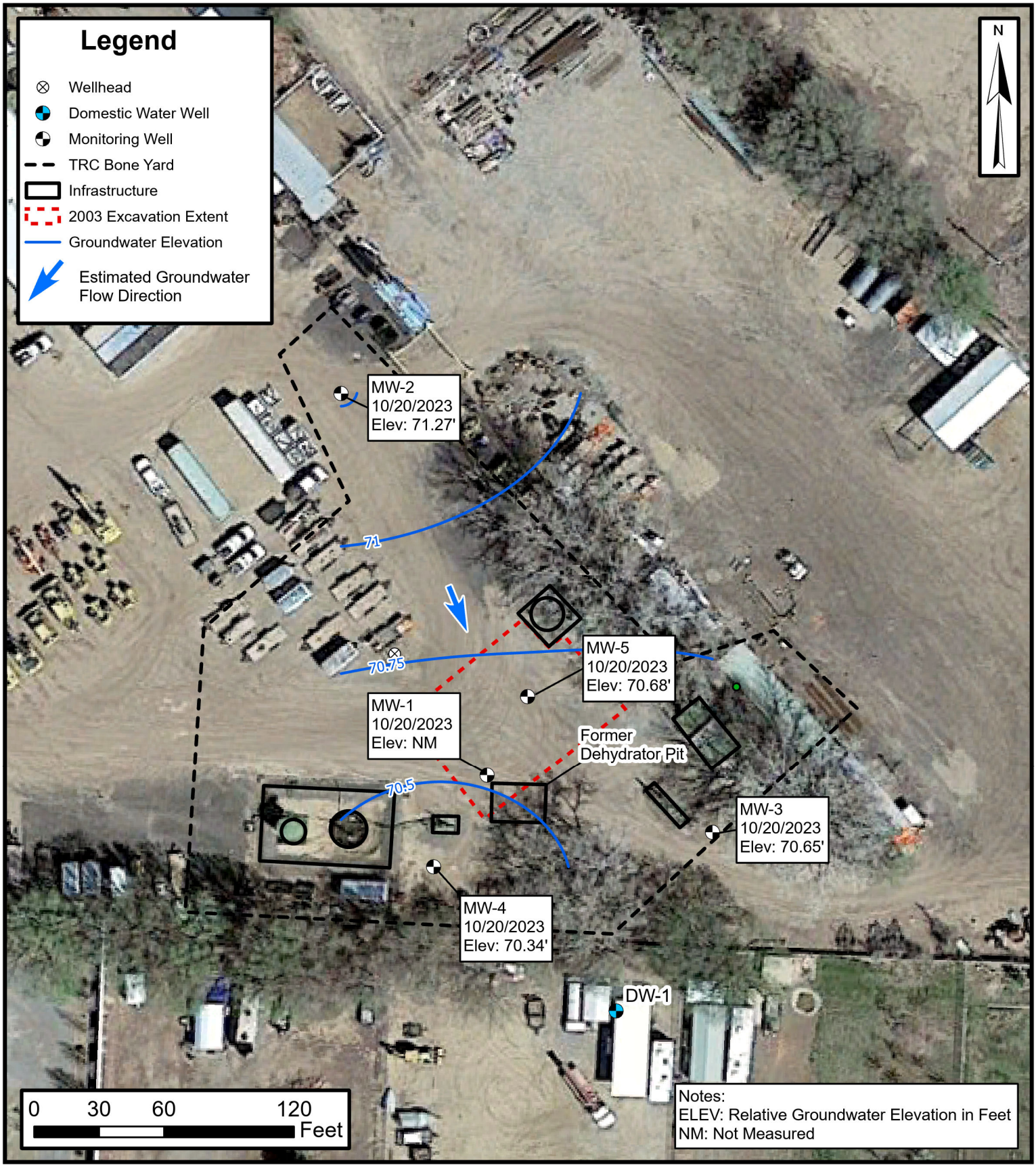
Environmental, Engineering and Hydrogeologic Consultants

Q3 2023 Groundwater Elevation Contour Map

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
5

Sources: Google Earth 2019



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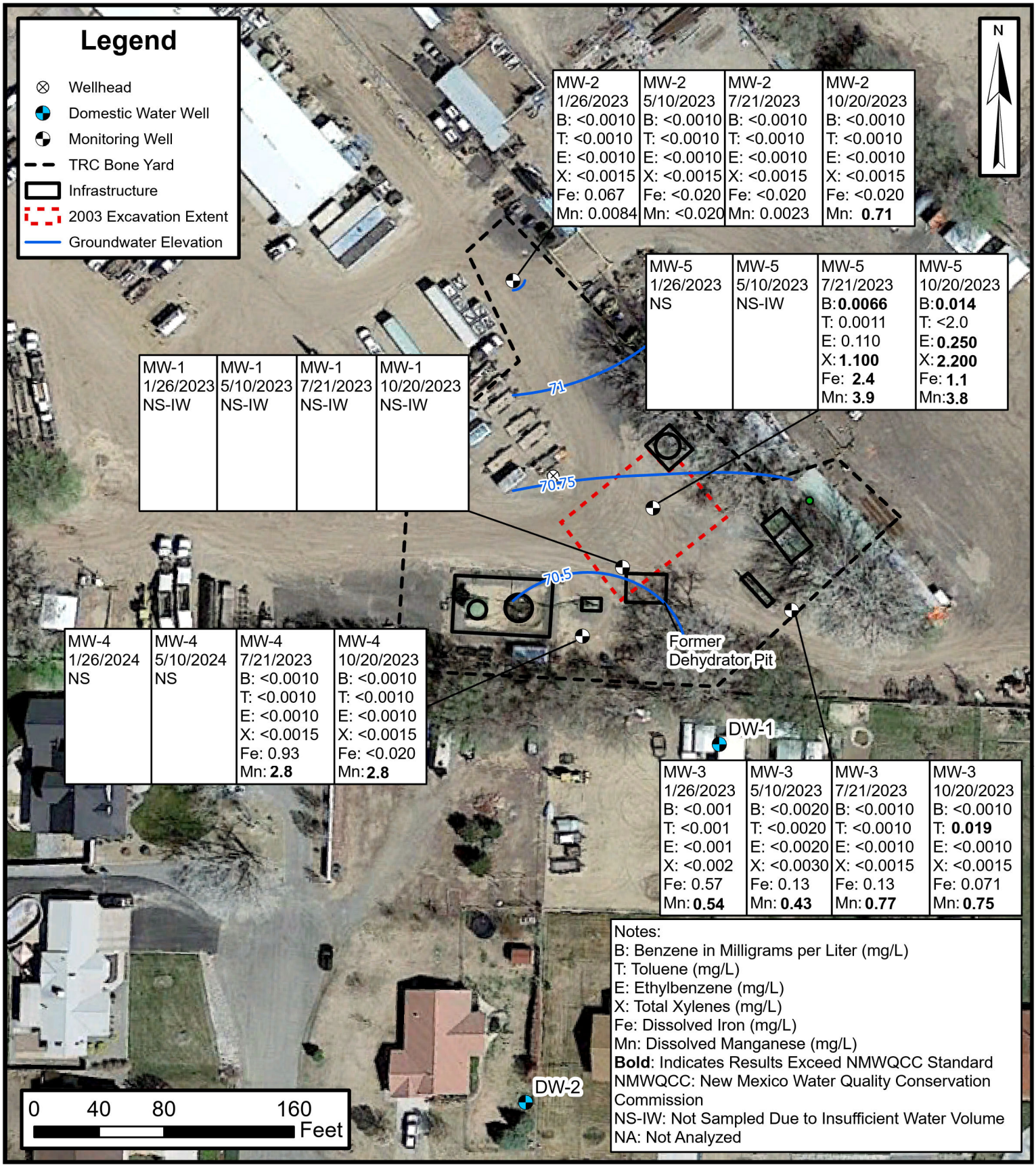
Q4 2023 Groundwater Elevation Contour Map

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
6

Sources: Google Earth 2019



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2023 Groundwater Analytical Results

Flora Vista #1
Hilcorp Energy Company
36.79852, -108.08759
San Juan County, New Mexico

FIGURE
7

Sources: Google Earth 2019

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TABLES

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TABLE 1
GROUNDWATER ELEVATIONS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Total Depth (feet)	Top of Casing Elevation (1)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (1)
MW-1	26.02	94.38	6/20/2003	--	--
			9/23/2003	17.03	77.35
			12/16/2003	20.11	74.27
			3/16/2004	23.69	70.69
			6/21/2004	19.92	74.46
			9/30/2004	16.82	77.56
			12/13/2004	20.40	73.98
			3/22/2005	24.32	70.06
			6/22/2005	--	--
			10/24/2005	--	--
			12/13/2005	21.24	73.14
			3/22/2006	24.75	69.63
			6/22/2006	20.48	73.90
			10/20/2006	19.13	75.25
			12/13/2006	21.24	73.14
			11/9/2007	19.71	74.67
			1/15/2008	--	--
			3/19/2008	24.35	70.03
			7/23/2008	19.89	74.49
			10/21/2008	19.48	74.90
			1/28/2009	23.96	70.42
			9/30/2009	18.16	76.22
			6/10/2010	21.64	72.74
			9/27/2010	19.31	75.07
			12/14/2010	21.41	72.97
			3/17/2011	24.95	69.43
			6/24/2011	22.55	71.83
			9/29/2011	18.37	76.01
			12/14/2011	20.63	73.75
			3/9/2012	24.12	70.26
		93.96	6/7/2012	23.08	70.88
			9/19/2012	18.94	75.02
			12/13/2012	21.22	72.74
			3/20/2013	24.79	69.17
			6/12/2013	22.51	71.45
			9/11/2013	18.34	75.62
			12/13/2013	21.53	72.43
			3/19/2014	25.26	68.70
			6/17/2014	21.55	72.41
			9/18/2014	19.58	74.38
			12/18/2014	**Well inaccessible**	

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TABLE 1
GROUNDWATER ELEVATIONS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Total Depth (feet)	Top of Casing Elevation (1)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (1)
MW-1	26.02	93.96	3/19/2015	25.18	68.78
			6/18/2015	23.56	70.40
			9/17/2015	21.85	72.11
			12/3/2015	22.65	71.31
			3/31/2016*	26.02	67.94
			6/20/2016	23.52	70.44
			9/6/2016	20.98	72.98
			11/29/2016	21.90	72.06
			3/9/2017	24.72	69.24
			6/15/2017	23.90	70.06
			9/27/2017	21.57	72.39
			12/5/2017	22.30	71.66
			3/15/2018	**Well Dry**	
			6/27/2018	**Well Dry**	
			9/6/2018	22.75	71.21
			12/20/2018	23.10	70.86
			3/6/2019	25.20	68.76
			6/12/2019	25.82	68.14
			9/6/2019	23.26	70.70
			12/9/2019	23.01	70.95
			3/16/2020	25.62	68.34
			6/10/2020	26.11	67.85
			8/28/2020	26.11	67.85
			11/5/2020	21.89	72.07
			2/8/2021	24.68	69.28
			6/28/2021	24.66	69.30
			9/20/2021	DRY	--
			11/5/2021	22.42	71.54
			2/7/2022	25.13	68.83
			4/25/2022	26.03	67.93
			7/28/2022	24.90	69.06
			10/27/2022	23.62	70.34
			1/26/2023	25.29	68.67
			5/10/2023	25.74	68.22
			7/21/2023	25.47	68.49
			10/20/2023	**Could not Locate Well**	
MW-2	31.35	97.10	10/21/2008	20.71	76.39
			1/28/2009	22.75	74.35
			9/30/2009	18.83	78.27
			6/11/2010	22.09	75.01
			9/27/2010	20.12	76.98
			12/14/2010	--	--
			3/17/2011	--	--
			6/24/2011	22.50	74.60
			9/29/2011	18.95	78.15
			12/14/2011	21.79	75.31

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GROUNDWATER ELEVATIONS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Total Depth (feet)	Top of Casing Elevation (1)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (1)
MW-2	31.35	97.10	3/9/2012	25.60	71.50
		97.00	6/7/2012	22.46	74.54
			9/19/2012	17.70	79.30
			12/13/2012	22.43	74.57
			3/20/2013	26.49	70.51
			6/12/2013	22.13	74.87
			9/11/2013	17.95	79.05
			12/13/2013	22.78	74.22
			3/19/2014	26.99	70.01
			6/17/2014	20.31	76.69
			9/18/2014	19.87	77.13
			12/18/2014	23.00	74.00
			3/19/2015	26.92	70.08
			6/18/2015	23.24	73.76
			9/17/2015	22.78	74.22
			12/3/2015	24.23	72.77
			3/31/2016	28.20	68.80
			6/20/2016	25.67	71.33
			9/6/2016	23.57	73.43
			11/29/2016	23.69	73.31
			3/9/2017	26.70	70.30
			6/15/2017	**Well inaccessible**	
			9/27/2017	23.84	73.16
			12/5/2017	**Well inaccessible**	
			3/15/2018	27.65	69.35
			6/27/2018	26.36	70.64
			9/6/2018	25.03	71.97
			12/20/2018	25.20	71.80
			3/7/2019	27.51	69.49
			6/13/2019	27.43	69.57
			9/6/2019	25.45	71.55
			12/10/2019	25.19	71.81
			3/26/2020	28.29	68.71
			6/10/2020	27.59	69.41
			8/28/2020	25.31	71.69
			11/5/2020	24.17	72.83
			2/8/2021	26.78	70.22
			6/28/2021	26.57	70.43
			9/20/2021	25.40	71.60
			11/5/2021	24.51	72.49
			2/8/2022	27.23	69.77
			4/25/2022	29.28	67.72
			7/28/2022	27.04	69.96
			10/27/2022	**Well Dry**	
			1/26/2023	27.63	69.37
			5/10/2023	29.68	67.32
			7/21/2023	27.50	69.50

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Well Identification	Total Depth (feet)	Top of Casing Elevation (1)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (1)
			10/20/2023	25.73	71.27
MW-3	30.87	92.9	10/21/2008	17.92	74.98
			1/28/2009	21.53	71.37
			9/30/2009	16.43	76.47
			6/10/2010	19.71	73.19
			9/27/2010	17.81	75.09
			12/14/2010	19.61	73.29
			3/17/2011	23.32	69.58
			6/24/2011	20.55	72.35
			9/29/2011	16.84	76.06
			12/14/2011	19.13	73.77
			3/9/2012	22.51	70.39
		92.43	6/7/2012	20.93	71.50
			9/19/2012	17.48	74.95
			12/13/2012	19.78	72.65
			3/20/2013	23.18	69.25
			6/12/2013	20.68	71.75
			9/11/2013	16.90	75.53
			12/13/2013	20.11	72.32
			3/19/2014	23.64	68.79
			6/17/2014	19.85	72.58
			9/18/2014	18.01	74.42
			12/18/2014	**Well inaccessible**	
			3/19/2015	23.55	68.88
			6/18/2015	21.84	70.59
			9/17/2015	20.18	72.25
			12/3/2015	21.10	71.33
			3/31/2016	24.81	67.62
			6/20/2016	21.66	70.77
			9/6/2016	19.18	73.25
			11/29/2016	20.39	72.04
			3/9/2017	23.35	69.08
			6/15/2017	22.03	70.40
			9/27/2017	**Well inaccessible**	
			12/5/2017	20.89	71.54
			3/15/2018	24.28	68.15
			6/27/2018	22.42	70.01
			9/6/2018	21.16	71.27
			12/20/2018	21.60	70.83
			3/6/2019	24.13	68.30

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San Juan County, New Mexico

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MW-3	30.87	92.43	6/12/2019	23.71	68.72
			9/5/2019	21.50	70.93
			12/10/2019	21.55	70.88
			3/16/2020	24.61	67.82
			6/10/2020	23.80	68.63
			8/27/2020	21.41	71.02
			11/5/2020	20.27	72.16
			2/5/2021	23.29	69.14
			6/28/2021	22.96	69.47
			9/20/2021	21.60	70.83
			11/5/2021	20.85	71.58
			2/7/2022	23.76	68.67
			4/25/2022	25.70	66.73
			7/28/2022	23.04	69.39
			10/27/2022	Well Dry	
			1/26/2023	24.14	68.29
			5/10/2023	25.92	66.51
			7/21/2023	23.42	69.01
			10/20/2023	21.78	70.65
MW-4	30.42	93.60	10/21/2008	18.06	75.54
			1/28/2009	24.55	69.05
			9/30/2009	17.89	75.71
			6/10/2010	21.02	72.58
			9/27/2010	18.93	74.67
			12/14/2010	21.04	72.56
			3/17/2011	24.58	69.02
			6/24/2011	21.80	71.80
			9/29/2011	17.94	75.66
			12/14/2011	20.28	73.32
			3/9/2012	23.70	69.90
		93.17	6/7/2012	22.19	70.98
			9/19/2012	18.60	74.57
			12/13/2012	20.96	72.21
			3/20/2013	24.38	68.79
			6/12/2013	21.81	71.36
			9/11/2013	18.89	74.28
			12/13/2013	21.28	71.89
			3/19/2014	24.88	68.29
			6/17/2014	21.21	71.96
			9/18/2014	19.16	74.01
			12/18/2014	21.41	71.76
			3/19/2015	24.80	68.37
			6/18/2015	23.09	70.08
			9/17/2015	21.37	71.80
			12/3/2015	22.29	70.88
			3/31/2016	26.05	67.12
			6/20/2016	22.95	70.22

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Total Depth (feet)	Top of Casing Elevation (1)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (1)
			9/6/2016	20.40	72.77
MW-4	30.42	93.17	11/29/2016	21.59	71.58
			3/9/2017	24.58	68.59
			6/15/2017	23.40	69.77
			9/27/2017	21.25	71.92
			12/5/2017	22.05	71.12
			3/15/2018	25.54	67.63
			6/27/2018	23.67	69.50
			9/6/2018	22.29	70.88
			12/20/2018	22.75	70.42
			3/6/2019	25.33	67.84
			6/12/2019	24.93	68.24
			9/5/2019	22.71	70.46
			12/9/2019	22.68	70.49
			3/16/2020	25.84	67.33
			6/10/2020	24.93	68.24
			8/27/2020	22.51	70.66
			11/5/2020	21.34	71.83
			2/5/2021	24.48	68.69
			6/28/2021	24.12	69.05
			9/20/2021	23.00	70.17
			11/4/2021	21.91	71.26
			2/7/2022	24.97	68.20
			4/25/2022	26.97	66.20
			7/28/2022	24.13	69.04
			10/27/2022	23.11	70.06
			1/26/2023	--	--
			5/10/2023	27.09	66.08
			7/21/2023	24.46	68.71
			10/20/2023	22.83	70.34
MW-5	29.68	93.82	9/17/2015	21.59	72.23
			12/3/2015	22.41	71.41
			3/31/2016	26.18	67.64
			6/20/2016	23.18	70.64
			9/6/2016	20.67	73.15
			11/29/2016	21.72	72.10
			3/9/2017	25.04	68.78
			6/15/2017	23.61	70.21
			9/27/2017	**Well inaccessible**	
			12/5/2017	21.96	71.86
			3/15/2018	25.55	68.27
			6/27/2018	23.93	69.89
			9/6/2018	22.54	71.28
			12/20/2018	22.84	70.98
			3/7/2019	25.39	68.43

ENSOLUM

TABLE 1
GROUNDWATER ELEVATIONS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Total Depth (feet)	Top of Casing Elevation (1)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (1)
MW-5	29.68	93.82	6/13/2019	24.75	69.07
			9/6/2019	22.78	71.04
			12/10/2019	22.84	70.98
			3/26/2020	26.17	67.65
			6/10/2020	25.25	68.57
			8/28/2020	22.87	70.95
			11/5/2020	21.21	72.61
			2/8/2021	24.62	69.20
			6/28/2021	24.24	69.58
			9/20/2021	23.00	70.82
			11/5/2021	22.15	71.67
			2/8/2022	25.06	68.76
			4/25/2022	27.00	66.82
			7/28/2022	24.57	69.25
			10/27/2022	**Well Dry**	
			1/26/2023	--	--
			5/10/2023	27.27	66.55
			7/21/2023	24.90	68.92
			10/20/2023	23.14	70.68

Notes:

(1): surface elevation based on an arbitrary datum of 100 feet set at the gas well head

bgs: below ground surface

BTOC: below top of casing

--: indicates no GWEL or PSH measured

ENSOLUM

TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Flora Vista #1
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	3/31/2016	No parameters or sample collected due to low well volume						
	6/20/2016	16.70	6.34	--	1,070	0.41	-132.7	0.25
	9/7/2016	15.55	6.30	0.027	3,700	9.16	-66.6	1.50
	3/9/2017	No parameters or sample collected due to low well volume						
	6/15/2017	No parameters or sample collected due to low well volume						
	12/5/2017	15.07	6.94	4.785	7,364	4.69	-183.5	0.50
	3/15/2018	No parameters or sample collected due to low well volume						
	6/27/2018	No parameters or sample collected due to low well volume						
	9/6/2018	16.08	7.10	--	7,138	2.51	-117.9	0.50
	3/6/2019	14.60	7.63	0.640	1,260	--	-40.8	0.25
	6/12/2019	No parameters or sample collected due to low well volume						
	9/6/2019	21.30	6.99	1.220	2,430	--	-4.0	1.25
	12/9/2019	--	6.25	1.110	2,230	0.60	-17.8	1.00
	3/16/2020	22.40	6.33	1.820	3,630	8.08	-14.1	--
	6/10/2020	No parameters or sample collected due to low well volume						
	8/28/2020	No parameters or sample collected due to low well volume						
	11/5/2020	14.70	6.65	1.880	3,750	4.80	-12.6	--
	2/8/2021	13.80	6.22	0.600	1,200	1.14	7.0	
	6/28/2021	No parameters taken due to equipment not functional						
	9/20/2021	No parameters or sample collected due to low well volume						
	11/5/2021	11.70	6.78	--	2,870	--	--	1.75
	2/7/2022	11.60	6.56	--	2,990	--	--	0.25
	4/25/2022	No parameters or sample collected due to low well volume						
	7/28/2022	No parameters or sample collected due to low well volume						
	10/27/2022	13.20	6.75	1.090	2,170	--	--	0.50
	1/26/2023	No parameters or sample collected due to low well volume						
	5/10/2023	No parameters or sample collected due to low well volume						
	7/21/2023	No parameters or sample collected due to low well volume						
	10/20/2023	No parameters or sample collected due to low well volume						

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Flora Vista #1
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-2	3/31/2016	No parameters or sample collected due to low well volume						
	6/20/2016	17.00	6.40	--	870	2.32	-104.0	1.50
	9/7/2016	15.00	6.57	0.571	879	3.67	-19.9	4.00
	11/29/2016	14.78	7.21	--	909	4.51	-17.1	--
	3/9/2017	No parameters or sample collected due to low well volume						
	3/15/2018	15.24	7.06	--	977	0.93	56.3	2.00
	6/27/2018	No parameters or sample collected due to low well volume						
	9/6/2018	16.05	7.30	--	929	1.15	-0.80	3.50
	3/7/2019	19.40	6.96	0.510	1,020	--	-23.7	2.25
	6/13/2019	20.60	6.62	0.500	1,000	--	-10.2	2.00
	9/6/2019	21.00	6.77	0.520	1,030	--	-20.8	3.00
	12/10/2019	--	6.36	0.550	1,120	0.36	-23.3	3.00
	3/26/2020	16.40	6.18	0.530	1,060	8.47	-9.1	--
	6/10/2020	16.50	6.37	0.500	1,000	2.39	-15.1	--
	8/28/2020	14.70	6.67	0.500	1,010	2.21	-12.9	--
	11/5/2020	17.90	6.08	0.490	960	2.30	-7.0	--
	2/8/2021	15.70	6.06	0.520	1,040	0.58	-5.9	
	6/28/2021	No parameters taken due to equipment not functional						
	9/20/2021	17.40	6.90	--	2,960	--	--	3.18
	11/5/2021	18.80	5.94	--	1,000	--	--	3.50
	2/8/2022	14.10	6.38	--	970	--	--	2.25
	4/25/2022	16.60	6.21	0.460	930	--	--	1.27
	7/28/2022	20.40	6.61	0.450	900	--	--	2.25
	10/27/2022	No parameters or sample collected due to low well volume						
	1/26/2023	11.10	6.67	0.460	920	--	--	2.00
	5/10/2023	17.80	6.53	0.450	900	--	--	1.00
	7/21/2023	34.77	7.28	0.750	1,152	2.28	-175.90	1.00
	10/20/2023	26.18	7.49	0.760	1,175.6	2.47	-89.20	1.25

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Flora Vista #1
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	3/31/2016	14.68	7.13	0.510	800	4.66	-13.0	2.50
	6/20/2016	14.90	7.05	--	750	2.02	83.2	4.00
	9/7/2016	14.19	6.02	0.467	719	5.55	12.5	5.00
	11/29/2016	13.68	7.41	--	725	5.03	-11.4	--
	3/9/2017	14.44	7.06	0.675	1,038	1.38	-199.9	--
	6/15/2017	13.90	7.67	0.470	723	4.06	-79.1	1.00
	12/5/2017	12.80	7.10	0.513	788	2.09	-135.4	4.00
	3/15/2018	14.54	7.22	--	702	2.71	59.2	2.50
	6/27/2018	15.30	7.12	--	680	2.58	-16.8	3.75
	9/6/2018	14.81	7.49	--	639	4.77	-20.0	4.00
	3/6/2019	--	7.30	0.380	770	--	-21.6	2.5
	6/12/2019	19.40	6.91	0.360	740	--	-57.0	2.00
	9/5/2019	20.00	7.15	0.360	720	--	-29.4	3.25
	12/10/2019	--	6.36	0.390	780	1.36	-1.9	3.00
	3/16/2020	19.60	6.44	0.380	780	8.65	-25.2	--
	6/10/2020	17.60	6.2	0.380	760	2.77	-22.8	--
	8/27/2020	24.10	6.43	0.590	1,180	1.46	-10.7	--
	11/5/2020	14.40	6.43	0.400	800	4.45	-14.3	--
	2/5/2021	23.29	6.42	0.350	700	1.79	-25.8	
	6/28/2021	**No parameters taken due to equipment not functional**						
	9/20/2021	17.80	6.86	--	1,923	--	--	3.96
	11/5/2021	15.10	6.1	--	690	--	--	4.25
	2/7/2022	12.80	6.67	--	660	--	--	2.50
	4/25/2022	16.00	6.52	0.360	730	--	--	2.00
	7/28/2022	19.30	6.82	0.340	670	--	--	3.00
	10/27/2022	**No parameters or sample collected due to low well volume**						
	1/26/2023	8.00	6.92	0.390	700	--	--	2.50
	5/10/2023	18.30	6.72	0.350	700	--	--	1.00
	7/21/2023	33.67	7.48	0.660	1,019	0.96	-100.9	3.00

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Flora Vista #1
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)
	10/20/2023	19.92	7.53	0.690	1,068.8	1.19	-82.7	3.75
MW-4	3/31/2016	15.60	6.98	0.700	1,030	5.73	-47.0	2.25
	6/20/2016	15.20	6.79	--	1,040	1.06	-60.8	3.50
	9/7/2016	14.55	6.40	0.655	1,008	2.48	-59.8	4.50
	11/29/2016	13.58	7.16	--	903	3.04	-80.9	--
	3/9/2017	14.45	6.96	0.753	1,159	1.69	-133.5	--
	6/15/2017	13.63	7.00	1.769	2,721	5.00	-114.3	3.50
	12/5/2017	13.88	6.84	1.721	2,647	1.13	-135.7	4.00
	3/15/2018	15.04	7.04	--	1,180	--	-100.2	2.25
	6/27/2018	15.21	6.80	--	1,315	0.55	-79.0	3.00
	9/6/2018	15.15	7.11	--	1,394	1.05	-73.1	4.00
	3/6/2019	15.90	7.21	0.620	1,260	--	-7.5	2.50
	6/12/2019	19.80	6.66	0.710	1,410	--	6.9	2.50
	9/5/2019	18.10	7.04	0.530	1,070	--	2.7	3.50
	12/9/2019	--	6.10	0.770	1,550	0.00	3.8	3.00
	3/16/2020	13.90	6.48	0.660	1,310	6.03	7.2	--
	6/9/2020	16.70	6.33	0.550	1,060	1.85	16.1	--
	8/27/2020	22.00	6.47	0.510	1,050	1.45	14.6	--
	11/5/2020	14.10	6.09	0.500	1,000	1.76	18.9	--
	2/5/2021	10.70	6.50	0.550	1,100	1.57	12.7	
	6/28/2021	**No parameters taken due to equipment not functional**						
	9/20/2021	17.10	6.73	--	2,370	--	--	3.60
	11/4/2021	15.30	6.01	--	1,080	--	--	4.00
	2/7/2022	11.70	6.43	--	1,020	--	--	2.50
	4/25/2022	16.30	6.16	0.490	1,000	--	--	1.50
	7/28/2022	18.50	6.54	0.360	730	--	--	3.00
	10/27/2022	11.30	6.61	0.400	810	--	--	3.50
	1/26/2023	**No parameters taken due to inacessable well**						
	5/10/2023	**No parameters taken due to inacessable well**						

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Flora Vista #1
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)
	7/21/2023	31.77	7.09	0.560	858	1.41	-66	0.00
	10/20/2023	15.56	7.29	0.600	921.46	2.14	-79.5	1.25
MW-5	3/31/2016	16.16	7.13	0.600	980	4.74	-97.0	1.75
	6/20/2016	15.90	6.88	--	1,030	0.68	-99.7	3.25
	9/7/2016	14.96	6.34	0.599	918	1.51	-130.2	4.50
	3/9/2017	15.29	7.35	0.793	1,255	8.83	-124.9	--
	6/15/2017	14.56	7.06	3.143	4,842	2.19	-132.6	2.00
	12/5/2017	15.11	6.76	0.706	1,086	0.52	-160.5	2.25
	3/15/2018	14.70	6.75	--	2,400	0.39	-9.2	0.50
	6/27/2018	**No parameters or sample collected due to low well volume**						
	9/6/2018	16.47	7.17	--	1,460	1.65	-125.0	1.00
	3/7/2019	19.60	6.92	0.480	940	--	0.3	0.75
	6/13/2019	19.50	6.58	1.460	2,930	--	0.3	1.00
	9/6/2019	26.00	6.50	1.000	2,000	--	17.5	2.00
	12/10/2019	--	6.53	0.240	490	0.47	-3.4	2.00
	3/26/2020	16.10	6.01	0.400	780	9.37	33.1	--
	6/10/2020	14.50	5.99	1.400	2,810	1.69	26.3	--
	8/28/2020	19.10	6.19	1.610	3,190	1.15	12.2	--
	11/5/2020	18.10	6.14	0.880	1,780	3.65	11.4	--
	2/8/2021	15.00	6.04	0.210	430	1.14	33.3	
	6/28/2021	**No parameters taken due to equipment not functional**						

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TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
Flora Vista #1
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	9/20/2021	18.80	6.93	--	4,001	--	--	2.77
	11/5/2021	17.10	5.91	--	840	--	--	2.25
	2/8/2022	12.90	6.09	--	670	--	--	0.25
	4/25/2022	**No parameters or sample collected due to low well volume**						
	7/28/2022	19.70	6.32	1.230	2,450	--	--	1.00
	10/27/2022	**No parameters or sample collected due to low well volume**						
	1/26/2023	**No parameters taken due to inacessable well**						
	5/10/2023	**No parameters or sample collected due to low well volume**						
	7/21/2023	34.44	7.30	2.400	3,695	0.30	-268.60	0.50
	10/20/2023	21.45	7.40	0.950	1,454.8	0.40	-94.50	2.50

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
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	**1.0**	**0.20**
MW-1	6/20/2003	(orig)	**1.7**	0.3	0.49	**5.09**	--	--
	9/23/2003	(orig)	**7.5**	0.02	0.66	**9.22**	--	--
	12/16/2003	(orig)	**7.93**	0.01	**1.18**	**0.864**	--	--
	3/16/2004	(orig)	**6.86**	ND	**1.16**	**8.47**	--	--
	6/21/2004	(orig)	**4.14**	ND	0.43	**3.12**	--	--
	9/30/2004	(orig)	**9.08**	0.03	**1.41**	**9.98**	--	--
	12/13/2004	(orig)	**8.52**	ND	**1.34**	**9.39**	--	--
	3/22/2005	(orig)	**4.55**	ND	**0.85**	**5.95**	--	--
	6/22/2005	(orig)	--	0.02188	--	--	--	--
	10/24/2005	(orig)	**6.39**	ND	**1.01**	**7.42**	--	--
	12/13/2005	(orig)	**6.17**	ND	**1.01**	**7.57**	--	--
	3/22/2006	(orig)	**3.58**	ND	**0.77**	**5.84**	--	--
	6/22/2006	(orig)	**3.1**	ND	0.5	**3.5**	--	--
	10/20/2006	(orig)	**6.6**	0.01	**1.22**	**8.91**	--	--
	12/13/2006	(orig)	**4.23**	0.01	**1.09**	**8.13**	--	--
	3/27/2007	(orig)	**2.37**	0.007	0.504	**3.75**	--	--
	6/25/2007	(orig)	**2.87**	0.14	0.51	**3.89**	--	--
	11/9/2007	(orig)	**5.6**	< 0.0007	**0.91**	**6.8**	--	--
	1/15/2008	(orig)	**4.2**	< 0.0007	**0.89**	**5.7**	--	--
	3/19/2008	(orig)	**2.7**	< 0.005	0.59	**4.7**	--	--
	7/23/2008	(orig)	**2**	< 0.005	0.38	**1.4**	--	--
	10/21/2008	(orig)	**4.5**	< 0.005	0.63	**5.3**	--	--
	1/28/2009	(orig)	**4**	< 0.005	**0.88**	**8.7**	--	--
	9/30/2009	(orig)	**4.2**	0.0016	0.53	**5.1**	**2.08**	**1.09**
	6/10/2010	(orig)	**1.7**	0.0012	0.33	**0.99**	0.126	**1.28**
	9/27/2010	(orig)	**3.2**	0.002	0.53	**4.20**	**7.73**	**1.19**
	12/14/2010	(orig)	**3.2**	0.0012	0.62	**5.30**	**4.13**	**0.888**
	3/17/2011	(orig)	**1.7**	0.0037	0.48	**4.31**	**1.11**	**1.07**
	6/24/2011	(orig)	**2.1**	0.0025	0.494	**2.03**	< 0.1	**0.894**
	6/24/2011	(Duplicate)	**1.97**	0.0026	0.458	**1.94**	--	--
	9/29/2011	(orig)	**2.44**	< 0.005	0.519	**3.65**	**25.2**	**1.02**
	12/14/2011	(orig)	**2.31**	0.0055	0.508	**3.93**	**25.4**	**0.945**
	3/9/2012	(orig)	**1.59**	< 0.001	0.636	**5.04**	**25.3**	**1.03**
	6/7/2012	(orig)	**1.77**	0.127	0.182	**0.633**	**21.4**	**0.914**
	9/19/2012	(orig)	**1.52**	< 0.020	0.414	**2.49**	**19**	**0.86**
	12/13/2012	(orig)	**2.02**	< 0.025	**0.809**	**5.02**	**23.8**	**0.75**
	3/20/2013	(orig)	**0.182**	< 0.002	0.0406	0.0914	**9.39**	**1.08**
	6/12/2013	(orig)	**0.698**	< 0.001	0.160	**0.873**	**12.8**	**1.12**
	9/11/2013	(orig)	**1.05**	< 0.020	**0.831**	**5.1**	**18.0**	**1.05**
	12/13/2013	(orig)	**0.591**	0.0015	0.670	**1.79**	**25.4**	**0.88**
	3/19/2014	(orig)	**0.0822**	< 0.001	0.039	0.271	--	--
	6/17/2014	(orig)	**0.522**	< 0.001	0.189	0.398	**17.4**	**0.896**
	9/18/2014	(orig)	**0.849**	< 0.001	0.299	**1.23**	**23.4**	**1.01**
	12/18/2014	**Well was obstructed and inaccessible due to TRC operations**						
	3/19/2015	**No parameters or sample collected due to low well volume**						
	6/18/2015	(orig)	**0.213**	< 0.001	0.116	**0.691**	**5.72**	**0.542**
	6/18/2015	(Duplicate)	**0.17**	< 0.001	0.0684	0.533	--	--
	9/17/2015	(orig)	**0.0673**	< 0.001	0.0859	0.362	**4.22**	**0.614**
	12/3/2015	(orig)	**0.0908**	< 0.001	**0.0612**	0.138	**2.69**	**0.63**
	3/31/2016	**No parameters or sample collected due to low well volume**						
	6/20/2016	(orig)	**0.834**	< 0.025	0.533	**2.06**	**40.8**	**2.17**
	9/7/2016	(orig)	**0.525**	< 0.020	0.416	**1.62**	**17.6**	**1.51**
	10/25/2016	**ISCO Injection-15% PersulfOx solution**						
	3/9/2017	**No parameters or sample collected due to low well volume**						
	6/15/2017	(orig)	**0.0371**	<1.0	0.0404	0.157	--	--
	9/27/2017	(orig)	**0.0231**	<1.0	0.0306	0.118	**24.2**	**3.13**
	12/5/2017	(orig)	**0.288**	<1.0	0.444	**1.07**	**19.9**	**3.27**
	3/15/2018	**No parameters or sample collected due to low well volume**						
	6/27/2018	**No parameters or sample collected due to low well volume**						
	9/6/2018	(orig)	**0.0313**	<1.0	0.1730	0.365	**11.70**	**5.83**
	12/20/2018	(orig)	**0.0827**	<0.001	0.1560	0.468	0.4870	0.0241
	3/6/2019	(orig)	**0.0093**	<0.005	0.0088	0.0355	0.4970	**0.4940**
	6/13/2019	**No parameters or sample collected due to low well volume**						
	9/6/2019	(orig)	**0.0174**	0.0014	0.0124	0.119	**1.38**	**2.75**
	12/9/2019	(orig)	**0.0195**	<0.001	<0.001	0.0567	**4.54**	**1.38**
	3/16/2020	(orig)	**0.0196**	<0.001	0.0174	0.106	--	--

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	**1.0**	**0.20**
MW-1	6/10/2020	**No parameters or sample collected due to low well volume**						
	8/28/2020	**No parameters or sample collected due to low well volume**						
	11/5/2020	(orig)	**0.0426**	<0.001	0.0505	0.345	<0.10	--
	2/8/2021	(orig)	0.0033	<0.001	0.0025	0.022	**12.90**	**1.65**
	6/28/2021	(orig)	**0.0350**	<0.005	0.0540	0.200	**2.00**	**1.80**
	9/20/2021	**No parameters or sample collected due to low well volume**						
	11/5/2021	(orig)	**0.0160**	0.0230	0.0260	0.130	**1.20**	**2.20**
	2/7/2022	(orig)	**0.0160**	<0.005	<0.005	0.046	--	--
	4/25/2022	**No parameters or sample collected due to low well volume**						
	7/28/2022	**No parameters or sample collected due to low well volume**						
	10/27/2022	(orig)	**0.0260**	<0.005	0.035	0.17	0.62	**1.8**
	1/26/2023	**No parameters or sample collected due to low well volume**						
	5/10/2023	**No parameters or sample collected due to low well volume**						
	7/21/2023	**No parameters or sample collected due to low well volume**						
MW-2	10/21/2008	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--
	1/28/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	ND	ND
	9/30/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0223	< 0.005
	6/11/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	< 0.005
	9/27/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	< 0.005
	6/24/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	0.191	< 0.015
	9/29/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.05	< 0.005
	12/14/2011	(orig)	0.00031 J	< 0.001	0.0002 J	0.0022 J	0.0133 J	0.0022 J
	3/9/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.05	< 0.005
	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	0.0822	0.0052
	9/19/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.05	< 0.005
	12/13/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	<0.05	< 0.005
	3/20/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.05	< 0.005
	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	0.0665	< 0.005
	9/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	< 0.005
	12/13/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	< 0.005
	3/19/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	0.024
	6/17/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	< 0.005
	9/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	0.0656	< 0.005
	12/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	0.709	0.006
	3/19/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	0.883	0.043
	6/18/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	< 0.005
	9/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	< 0.005
	12/3/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.050	< 0.005
	3/31/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	0.0585	<0.005
	6/20/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	9/7/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	0.0512	< 0.005
	11/29/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	9/27/2017	(orig)	<0.001	<0.001	<0.001	< 0.003	<0.50	0.013
	3/15/2018	(orig)	<0.001	<0.001	<0.001	< 0.003	<0.50	0.011
	6/27/2018	(orig)	<0.001	<0.001	<0.001	< 0.003	0.0512	0.017
	9/6/2018	(orig)	<0.001	<0.001	<0.001	< 0.003	0.104	**0.270**
	12/20/2018	(orig)	<0.001	< 0.003	< 0.002	< 0.004	<0.10	<0.01
	3/7/2019	(orig)	--	--	--	--	--	<0.01
	6/13/2019	(orig)	--	--	--	--	<0.10	0.013
	9/6/2019	(orig)	--	--	--	--	--	0.085
	12/10/2019	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	<0.01
	3/26/2020	(orig)	<0.001	<0.001	< 0.001	<0.003	<0.10	<0.01
	6/10/2020	(orig)	<0.001	<0.001	<0.003	<0.003	<0.10	--
	8/28/2020	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	--
	11/5/2020	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	--
	2/8/2021	(orig)	<0.001	<0.001	<0.001	< 0.003	<0.10	<0.01
	6/28/2021	(orig)	<0.001	<0.001	<0.001	<0.0015	0.75	**0.51**
	9/20/2021	(orig)	<0.001	<0.001	<0.001	<0.002	0.88	**0.72**
	11/5/2021	(orig)	<0.001	<0.001	<0.001	<0.0015	0.06	0.080
	2/7/2022	(orig)	<0.001	<0.001	<0.001	<0.0015	<0.020	0.046
	4/25/2022	(orig)	<0.001	<0.001	<0.001	<0.0015	<0.020	0.030
	7/28/2022	(orig)	<0.001	<0.001	<0.001	<0.0015	<0.020	<0.0020
	10/27/2022	(orig)	<0.001	<0.001	<0.001	<0.0015	<0.020	0.026
	1/26/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	0.067	0.0084
	5/10/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	<0.020	<0.0020
	7/21/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	<0.020	0.0023
	10/20/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	<0.020	**0.71**
MW-3	10/21/2008	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--
	1/28/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	ND	ND
	9/30/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0543	< 0.005
	6/10/2010	(orig)	< 0.0005	< 0.001	< 0.001	< 0.001	0.0425	< 0.005
	9/27/2010	(orig)	<0.001	<0.001	<0.001	< 0.001	< 0.02	< 0.005

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	**1.0**	**0.20**
MW-3	12/14/2010	(orig)	<0.001	<0.001	<0.001	< 0.001	< 0.02	< 0.005
	3/17/2011	(orig)	<0.001	<0.001	<0.001	< 0.001	< 0.02	< 0.005
	6/24/2011	(orig)	<0.001	<0.001	<0.001	< 0.0030	0.189	< 0.015
	9/29/2011	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.05	0.0063
	12/14/2011	(orig)	<0.001	<0.001	<0.001	< 0.003	0.0288 J	0.0207
	3/9/2012	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.05	< 0.005
	6/7/2012	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.05	< 0.005
	9/19/2012	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.05	< 0.005
	12/13/2012	(orig)	<0.001	<0.001	<0.001	< 0.003	0.0605	0.026
	3/20/2013	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.05	0.0149
	6/12/2013	(orig)	<0.001	<0.001	<0.001	< 0.003	0.189	0.0094
	9/11/2013	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	12/13/2013	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	0.013
	3/19/2014	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	6/17/2014	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	9/18/2014	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	12/18/2014	**Wellhead inaccessible due to standing water.**						
	3/19/2015	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	6/18/2015	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	9/17/2015	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	12/3/2015	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	0.0258
	3/31/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	0.138	**0.368**
	6/20/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	0.0078
	9/7/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	11/29/2016	(orig)	<0.001	<0.001	<0.001	< 0.003	0.103	0.197
	3/9/2017	(orig)	--	--	--	--	0.878	**0.904**
	6/15/2017	(orig)	--	--	--	--	< 0.050	< 0.005
	12/5/2017	(orig)	--	--	--	--	< 0.050	0.106
MW-3	3/15/2018	(orig)	<0.001	<0.001	<0.001	< 0.003	0.0642	< 0.005
	6/27/2018	(orig)	<0.001	<0.001	<0.001	< 0.003	< 0.050	< 0.005
	9/6/2018	(orig)	<0.001	<0.001	<0.001	< 0.003	0.85	**0.249**
	12/20/2018	(orig)	<0.001	< 0.003	< 0.002	< 0.004	<0.10	0.0153
	3/6/2019	(orig)	--	--	--	--	--	0.0412
	6/13/2019	(orig)	--	--	--	--	<0.10	<0.010
	9/6/2019	(orig)	--	--	--	--	--	0.0127
	12/10/2019	(orig)	<0.001	<0.001	<0.001	<0.003	0.707	**0.682**
	3/16/2020	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	<0.010
	6/9/2020	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	<0.010
	8/27/2020	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	<0.010
	11/5/2020	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	<0.010
	2/5/2021	(orig)	<0.001	<0.001	<0.001	< 0.003	<0.10	< 0.010
	6/28/2021	(orig)	<0.001	<0.001	<0.001	< 0.0015	< 0.020	0.006
	9/20/2021	(orig)	<0.001	<0.001	<0.001	< 0.002	**7.1***	0.12
	11/5/2021	(orig)	<0.001	<0.001	<0.001	< 0.0015	0.077	0.13
	2/7/2022	(orig)	<0.001	<0.001	<0.001	< 0.0015	< 0.020	0.098
	4/25/2022	(orig)	<0.001	<0.001	<0.001	< 0.0015	< 0.020	0.018
	7/28/2022	(orig)	<0.001	<0.001	<0.001	<0.0015	0.021	0.10
	10/27/2022	**No parameters or sample collected due to low well volume.**						
	1/26/2023	(orig)	<0.0020	<0.0020	<0.0020	<0.0030	0.57	**0.54**
	5/10/2023	(orig)	<0.0020	<0.0020	<0.0020	<0.0030	0.13	**0.43**
	7/21/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	0.13	**0.77**
	10/20/2023	(orig)	<0.0010	**.019**	<0.0010	<0.0015	0.071	**0.75**
MW-4	10/21/2008	(orig)	**0.039**	< 0.0005	0.031	0.18	--	--
	1/28/2009	(orig)	**0.66**	< 0.0005	0.064	0.583	ND	ND
	9/30/2009	(orig)	**0.34**	< 0.0005	0.054	0.572	0.148	**4.48**
	6/10/2010	(orig)	**0.14**	< 0.001	0.027	0.252	0.0566	**4.65**
	9/27/2010	(orig)	**0.033**	< 0.001	0.041	0.274	**1.22**	**4.34**
	12/14/2010	(orig)	**0.13**	< 0.001	0.093	**0.899**	**1.75**	**4.69**
	3/17/2011	(orig)	**0.017**	< 0.001	0.018	0.1966	0.0852	**4.46**
	6/24/2011	(orig)	**0.0296**	< 0.0010	0.0371	0.472	**1.5**	**4.9**
	9/29/2011	(orig)	**0.0392**	< 0.001	0.0039	0.0536	**2.55**	**4.1**
	9/29/2011	(Duplicate)	**0.043**	< 0.001	0.0035	0.0483	--	--
	12/14/2011	(orig)	**0.101**	< 0.001	0.0443	0.378	**2.62**	**4.58**
	12/14/2011	(Duplicate)	**0.104**	< 0.005	0.0437	0.372	--	--
	3/9/2012	(orig)	**0.0264**	< 0.001	0.0066	0.0651	**2.46**	**4.73**
	3/9/2012	(Duplicate)	**0.0234**	< 0.001	0.0056	0.058	--	--
	6/7/2012	(orig)	**0.044**	< 0.001	0.0245	0.303	**2.07**	**4.02**
	6/7/2012	(Duplicate)	**0.026**	< 0.001	0.0124	0.155	--	--
	9/19/2012	(orig)	0.0029	< 0.001	0.0048	0.0576	**1.93**	**4.5**
	9/19/2012	(Duplicate)	0.0028	< 0.001	0.0045	0.0551	--	--
	12/13/2012	(orig)	**0.0941**	< 0.002	0.0399	0.385	**2.92**	**4.9**
	12/13/2012	(Duplicate)	**0.197**	< 0.001	0.0712	0.55	--	--
	3/20/2013	(orig)	0.0035	< 0.001	0.002	0.0211	**1.82**	**4.37**

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			0.005	1.00	0.70	0.62	1.0	0.20
	3/20/2013	(Duplicate)	0.0034	< 0.001	0.0022	0.0212	--	--
	6/12/2013	(orig)	**0.0588**	< 0.005	0.0509	0.545	**1.53**	**4.29**
	6/12/2013	(Duplicate)	**0.0215**	< 0.001	0.0213	0.218	--	--
	9/11/2013	(orig)	**0.0166**	< 0.001	0.0231	0.226	**3.1**	**4.35**
MW-4	9/11/2013	(Duplicate)	**0.0156**	< 0.001	0.0162	0.158	--	--
	12/13/2013	(orig)	**0.0362**	< 0.001	0.0199	0.169	**2.7**	**4.8**
	12/13/2013	(Duplicate)	**0.0357**	< 0.001	0.0185	0.16	--	--
	3/19/2014	(orig)	< 0.001	< 0.001	< 0.001	0.0046	**1.33**	**4.19**
	3/19/2014	(Duplicate)	< 0.001	< 0.001	< 0.001	0.0049	--	--
	6/17/2014	(orig)	**0.0069**	< 0.001	< 0.001	< 0.003	**2.68**	**4.01**
	6/17/2014	(Duplicate)	**0.0063**	< 0.001	< 0.001	< 0.003	--	--
	9/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	**3.43**	**4.63**
	9/18/2014	(Duplicate)	0.0018	< 0.001	< 0.001	< 0.003	--	--
	12/18/2014	(orig)	**0.0398**	< 0.001	0.0062	0.0486	**4.02**	**4.46**
	12/18/2014	(Duplicate)	**0.0296**	< 0.001	0.0048	0.0354	--	--
	3/19/2015	(orig)	0.0012	< 0.001	< 0.001	< 0.003	**1.57**	**4.02**
	3/19/2015	(Duplicate)	0.0011	< 0.001	< 0.001	< 0.003	--	--
	6/18/2015	(orig)	**0.067**	< 0.001	0.0102	0.0563	**3.02**	**4.35**
	9/17/2015	(orig)	**0.0319**	< 0.001	0.0297	0.178	**3.03**	**3.75**
	11/29/2015	(Duplicate)	**0.0318**	< 0.001	0.027	0.162	--	--
	12/3/2015	(orig)	**0.0676**	< 0.01	0.0526	0.354	**4.34**	**4.12**
	12/3/2015	(Duplicate)	**0.0489**	< 0.01	0.0396	0.263	--	--
	3/31/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	**1.44**	**3.9**
	6/20/2016	(orig)	**0.0428**	<0.001	0.0112	0.0397	**4.88**	**3.87**
	9/7/2016	(orig)	**0.0081**	< 0.001	< 0.001	< 0.003	**4.01**	**3.84**
	11/29/2016	(orig)	**0.0346**	< 0.001	0.0077	0.0237	**4.31**	**3.88**
	3/9/2017	(orig)	<0.001	<0.001	<0.001	<0.003	<0.050	**3.06**
	6/15/2017	(orig)	**0.0224**	<0.001	0.0045	0.0206	**15.5**	**11.1**
	9/27/2017	(orig)	**0.0131**	<0.001	0.0043	0.0108	**22.7**	**7.68**
	12/5/2017	(orig)	**0.0247**	<0.001	0.0074	0.0161	**21.1**	**6.2**
	3/15/2018	(orig)	<0.001	<0.001	<0.001	<0.003	**5.68**	**1.64**
	6/27/2018	(orig)	**0.0114**	<0.001	0.0014	0.0031	<0.050	**3.83**
	9/6/2018	(orig)	**0.0179**	<0.001	0.0047	0.0068	**10.5**	**4.58**
	12/20/2018	(orig)	**0.0253**	<0.001	0.0132	0.0236	0.146	**4.82**
	3/6/2019	(orig)	0.00147	<0.001	<0.001	<0.003	<0.10	**2.29**
	6/12/2019	(orig)	0.0048	<0.001	<0.001	<0.003	<0.10	**3.55**
	9/6/2019	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	**3.11**
	12/9/2019	(orig)	**0.0318**	<0.001	0.0121	0.012	0.169	**4.43**
	3/16/2020	(orig)	<0.001	<0.001	<0.001	<0.003	0.222	**2.39**
	6/9/2020	(orig)	0.00155	<0.001	<0.001	<0.003	<0.10	--
	8/27/2020	(orig)	0.00311	<0.001	0.00125	<0.003	<0.10	--
	11/5/2020	(orig)	0.00181	<0.001	--	<0.003	<0.10	--
	2/5/2021	(orig)	<0.001	<0.001	<0.001	<0.003	<0.10	**3.26**
	6/28/2021	(orig)	< 0.001	< 0.001	< 0.001	< 0.0015	**6.2**	**2.9**
	9/20/2021	(orig)	< 0.001	< 0.001	< 0.001	< 0.002	**5.2**	**3.3**
	11/4/2021	(orig)	0.0012	< 0.001	< 0.001	< 0.0015	0.22	**4.2**
	2/7/2022	(orig)	0.0016	< 0.001	< 0.001	< 0.0015	**1.6**	**3.4**
	4/25/2022	(orig)	0.0016	< 0.001	< 0.001	< 0.0015	**1.6**	**4.0**
	7/28/2022	(orig)	< 0.001	<0.001	<0.001	<0.0015	**2.7**	**3.1**
	10/27/2022	(orig)	<0.001	<0.001	<0.001	<0.0015	**4.0**	**2.9**
	1/26/2023	No parameters or sample collected due to inaccessible well						
	5/10/2023	No parameters or sample collected due to inaccessible well						
	7/21/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	0.93	**2.8**
	10/20/2023	(orig)	<0.0010	<0.0010	<0.0010	<0.0015	<0.020	**2.8**
MW-5	9/17/2015	(orig)	**0.0182**	< 0.001	0.571	**4.95**	**2.72**	**2.94**
	12/3/2015	(orig)	**0.128**	< 0.001	**1.15**	**12.4**	**20.9**	**0.366**
	3/31/2016	(orig)	< 0.010	< 0.01	0.101	**0.936**	**2.06**	**2.18**
	3/31/2016	(Duplicate)	< 0.010	< 0.01	0.136	**1.26**	--	--
	6/20/2016	(orig)	**0.0404**	< 0.025	0.16	**2.48**	**6.48**	**2.68**
	9/7/2016	(orig)	**0.0229**	< 0.01	0.332	**3.45**	**4.6**	**2.07**
	9/7/2016	(Duplicate)	**0.0216**	< 0.010	0.393	**4.46**	--	--
	10/26/2016	ISCO Injection-15% PersulfOx solution						
	3/9/2017	(orig)	**0.0865**	<0.010	0.267	**3.65**	**24.6**	**11.8**
	6/15/2017	(orig)	**0.0369**	<0.010	0.0956	0.533	**7.43**	**6.26**
	12/5/2017	(orig)	**0.0562**	<0.010	0.51	**5.95**	**10.3**	**3.89**
	12/5/2017	(Duplicate)	**0.05**	<0.010	0.444	**5.97**	--	--
	3/15/2018	(orig)	< 0.020	< 0.020	0.388	**1.46**	--	--
	6/27/2018	(orig)	**0.0371**	< 0.020	0.123	**2.13**	**7.08**	**3.97**
	9/6/2018	(orig)	**0.0511**	<0.010	0.233	**1.94**	**4.9**	**2.31**
	12/20/2018	(orig)	**0.0568**	0.00136	0.448	**4.48**	0.748	**3.79**
	3/7/2019	(orig)	**0.0124**	<.002	0.003	0.146	**3.61**	**1.42**
	6/13/2019	(orig)	0.009	<0.001	0.054	0.376	<0.10	**3.00**
	9/6/2019	(orig)	**0.032**	<.001	<.001	**1.67**	**8.29**	**3.43**

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Flora Vista #1
Hilcorp Energy Company
San Juan County, New Mexico

Well ID	Sample Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)
NMWQCC Standards			**0.005**	**1.00**	**0.70**	**0.62**	**1.0**	**0.20**
	12/10/2019	(orig)	**0.0024**	<0.001	0.0414	0.236	0.829	**0.795**
	3/26/2020	(orig)	**0.0171**	<0.001	0.0133	0.579	**9.16**	**0.67**
	6/10/2020	(orig)	**0.00505**	<0.005	<0.005	0.296	**15.5**	--
MW-5	8/28/2020	(orig)	**0.0196**	<0.005	0.0389	**0.91**	**10.5**	--
	11/5/2020	(orig)	**0.0141**	0.00208	0.0987	**1.1**	**3.49**	--
	2/8/2021	(orig)	**0.00946**	<0.001	0.0314	0.316	**2.08**	**0.509**
	6/28/2021	(orig)	**0.013**	< 0.001	0.065	**0.93**	**30**	**2.9**
	9/20/2021	(orig)	**0.0090**	0.0053	0.033	0.43	**21**	**8.0**
	11/5/2021	(orig)	**0.0092**	0.041	0.076	**0.91**	**4.1**	**1.9**
	2/8/2022	(orig)	**0.0063**	0.0087	0.047	**0.62**	**3.2**	**1.6**
	4/25/2022	**No parameters or sample collected due to low well volume**						
	7/28/2022	(orig)	0.0036	< 0.001	0.0067	0.172	**22**	**5.2**
	10/27/2022	**No parameters or sample collected due to low well volume**						
	1/26/2023	**No parameters or sample collected due to inaccessible well**						
	5/10/2023	**No parameters or sample collected due to low well volume**						
	7/21/2023	(orig)	**0.0066**	0.0011	0.110	**1.100**	**2.4**	**3.9**
	10/20/2023	(orig)	**0.014**	<2.0	**0.250**	**2.200**	**1.1**	**3.8**
DW-1	12/16/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	--
	6/24/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	7/27/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	12/18/2014	**Attempt to contact landowner regarding well sampling. No response.**						
	6/18/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	6/20/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	9/27/2017	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	6/27/2018	**Unable to sample, homeowner away**						
	5/29/2019	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	<0.10	<0.010
	6/9/2020	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	<0.10	--
	6/28/2021	(orig)	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.020	0.12
	7/28/2022	**Attempt to contact landowner regarding well sampling. No response.**						
	7/21/2023	**Attempt to contact landowner regarding well sampling. No response.**						
DW-2	6/10/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	--
	3/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	--
	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	12/18/2014	**Attempt to sample well but landowner had shut well in for the winter months**						
	6/18/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	6/20/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	9/27/2017	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	6/27/2018	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--
	8/2/2019	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	<0.10	<0.010
	6/9/2020	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	<0.10	--
	6/28/2021	**Attempt to sample well but well not functional**						
	7/28/2022	**Attempt to contact landowner regarding well sampling. No response.**						
	7/21/2023	**Attempt to contact landowner regarding well sampling. No response.**						

Notes:

mg/L: milligrams per liter

J: The target analyte was positively identified below the quantitation limit and above the detection limit.

ND: not detected, practical quantitation limit unknown

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

**: anomalous result*

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

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

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APPENDIX A

Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 09, 2023

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

RE: Flora Vista 1 OrderNo.: 2301A59

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/27/2023 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 don't hesitate to contact HEAL 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 **2301A59**
Date Reported: **2/9/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-2
Project: Flora Vista 1 **Collection Date:** 1/26/2023 11:40:00 AM
Lab ID: 2301A59-001 **Matrix:** AQUEOUS **Received Date:** 1/27/2023 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**
Iron	0.067	0.020		mg/L	1	1/30/2023 5:53:56 PM
Manganese	0.0084	0.0020		mg/L	1	1/30/2023 5:53:56 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	ND	1.0		µg/L	1	2/2/2023 2:28:00 PM
Toluene	ND	1.0		µg/L	1	2/2/2023 2:28:00 PM
Ethylbenzene	ND	1.0		µg/L	1	2/2/2023 2:28:00 PM
Xylenes, Total	ND	1.5		µg/L	1	2/2/2023 2:28:00 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	2/2/2023 2:28:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	2/2/2023 2:28:00 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	2/2/2023 2:28:00 PM
Surr: Toluene-d8	97.7	70-130		%Rec	1	2/2/2023 2:28:00 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 **2301A59**
Date Reported: **2/9/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-3
Project: Flora Vista 1
Collection Date: 1/26/2023 10:35:00 AM
Lab ID: 2301A59-002 **Matrix:** AQUEOUS **Received Date:** 1/27/2023 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**
Iron	0.57	0.020	*	mg/L	1	1/30/2023 6:00:24 PM
Manganese	0.54	0.0020	*	mg/L	1	1/30/2023 6:00:24 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	ND	2.0	D	µg/L	2	2/2/2023 2:55:05 PM
Toluene	ND	2.0	D	µg/L	2	2/2/2023 2:55:05 PM
Ethylbenzene	ND	2.0	D	µg/L	2	2/2/2023 2:55:05 PM
Xylenes, Total	ND	3.0	D	µg/L	2	2/2/2023 2:55:05 PM
Surr: 1,2-Dichloroethane-d4	112	70-130	D	%Rec	2	2/2/2023 2:55:05 PM
Surr: 4-Bromofluorobenzene	105	70-130	D	%Rec	2	2/2/2023 2:55:05 PM
Surr: Dibromofluoromethane	111	70-130	D	%Rec	2	2/2/2023 2:55:05 PM
Surr: Toluene-d8	97.4	70-130	D	%Rec	2	2/2/2023 2:55:05 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#: **2301A59**

09-Feb-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B94301**	RunNo: **94301**
Prep Date:	Analysis Date: **1/30/2023**	SeqNo: **3406054** 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: **B94301**	RunNo: **94301**
Prep Date:	Analysis Date: **1/30/2023**	SeqNo: **3406055** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.022	0.020	0.02000	0	108	50	150			
Manganese	ND	0.0020	0.002000	0	97.4	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B94301**	RunNo: **94301**
Prep Date:	Analysis Date: **1/30/2023**	SeqNo: **3406056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.8	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301A59**

09-Feb-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R94371**	RunNo: **94371**
Prep Date:	Analysis Date: **2/2/2023**	SeqNo: **3409005** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R94371**	RunNo: **94371**
Prep Date:	Analysis Date: **2/2/2023**	SeqNo: **3409022** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

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.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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: 2301A59 RcptNo: 1

Received By: Tracy Casarrubias 1/27/2023 6:30:00 AM

Completed By: Tracy Casarrubias 1/27/2023 10:58:56 AM

Reviewed By: SCA 1/27/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☑	~~No~~ ☑ 1-27-23	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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

Adjusted? Yes

Checked by: 1-27-23

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 125 ml and added 0.4 ml of HNO3 to samples 001B and 002B for dissolved metals. 1-27-23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-1.5	Good	Yes	Yogi		

2 filters Lot # FG 5854 1-27-23

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#: khoekstra@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:
Flora Vista 1

Project #:

Project Manager:
Mitch Killough

Sampler: ~~Kurt Hoekstra~~ B Sinclair

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): -1.2-0.3=0.9 -1.5°C

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2301A59	Dissolved Mn and Fe 500ml HDPE*	BTEX 8260 40ml VOA HCl															
~~—~~	~~—~~	~~Water~~	~~MW-1~~	Various	Various		X	X	✓														
1-26	1140	Water	MW-2	Various	Various	001	X	X															
1-26	1035	Water	MW-3	Various	Various	002	X	X															
~~—~~	~~—~~	~~Water~~	~~MW-4~~	Various	Various		X	X	✓														
~~—~~	~~—~~	~~Water~~	~~MW-5~~	Various	Various		X	X			✓												

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1-26	1627				1/26/23	1627
Date:	Time:	Relinquished by:	Received by:	Via: courier	Date	Time
1/26/23	1742				1/27/23	6:30

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.
sample not frozen - TMC 1/27/23

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 26, 2023

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

RE: Flora Vista 1 OrderNo.: 2305705

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/12/2023 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 don't hesitate to contact HEAL 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 **2305705**
Date Reported: **5/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-2
Project: Flora Vista 1 **Collection Date:** 5/10/2023 1:20:00 PM
Lab ID: 2305705-001 **Matrix:** AQUEOUS **Received Date:** 5/12/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	5/15/2023 2:17:04 PM
Manganese	ND	0.0020		mg/L	1	5/15/2023 2:17:04 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**
Benzene	ND	1.0		µg/L	1	5/17/2023 4:39:52 PM
Toluene	ND	1.0		µg/L	1	5/17/2023 4:39:52 PM
Ethylbenzene	ND	1.0		µg/L	1	5/17/2023 4:39:52 PM
Xylenes, Total	ND	1.5		µg/L	1	5/17/2023 4:39:52 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	5/17/2023 4:39:52 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/17/2023 4:39:52 PM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	5/17/2023 4:39:52 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	5/17/2023 4:39:52 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 **2305705**
Date Reported: **5/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-3
Project: Flora Vista 1 **Collection Date:** 5/10/2023 12:30:00 PM
Lab ID: 2305705-002 **Matrix:** AQUEOUS **Received Date:** 5/12/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	0.13	0.020		mg/L	1	5/15/2023 2:20:23 PM
Manganese	0.43	0.0020	*	mg/L	1	5/15/2023 2:20:23 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**
Benzene	ND	2.0	D	µg/L	2	5/17/2023 6:09:48 PM
Toluene	ND	2.0	D	µg/L	2	5/17/2023 6:09:48 PM
Ethylbenzene	ND	2.0	D	µg/L	2	5/17/2023 6:09:48 PM
Xylenes, Total	ND	3.0	D	µg/L	2	5/17/2023 6:09:48 PM
Surr: 1,2-Dichloroethane-d4	110	70-130	D	%Rec	2	5/17/2023 6:09:48 PM
Surr: 4-Bromofluorobenzene	101	70-130	D	%Rec	2	5/17/2023 6:09:48 PM
Surr: Dibromofluoromethane	111	70-130	D	%Rec	2	5/17/2023 6:09:48 PM
Surr: Toluene-d8	96.2	70-130	D	%Rec	2	5/17/2023 6:09:48 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#: **2305705**

26-May-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A96767**	RunNo: **96767**
Prep Date:	Analysis Date: **5/15/2023**	SeqNo: **3509112** 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: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A96767**	RunNo: **96767**
Prep Date:	Analysis Date: **5/15/2023**	SeqNo: **3509114** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.54	0.020	0.5000	0	107	85	115			
Manganese	0.52	0.0020	0.5000	0	105	85	115			

Sample ID: **LCS_CAT-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A96767**	RunNo: **96767**
Prep Date:	Analysis Date: **5/15/2023**	SeqNo: **3509115** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2305705**
26-May-23

Client: HILCORP ENERGY
Project: Flora Vista 1

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **SL96842** RunNo: **96842**
Prep Date: Analysis Date: **5/17/2023** SeqNo: **3512813** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID: **2305705-001ams** SampType: **MS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-2** Batch ID: **SL96842** RunNo: **96842**
Prep Date: Analysis Date: **5/17/2023** SeqNo: **3512815** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID: **2305705-001amsd** SampType: **MSD** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-2** Batch ID: **SL96842** RunNo: **96842**
Prep Date: Analysis Date: **5/17/2023** SeqNo: **3512816** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130	5.54	20	
Toluene	20	1.0	20.00	0	98.3	70	130	5.04	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		110	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		96.1	70	130	0	0	

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **SL96842** RunNo: **96842**
Prep Date: Analysis Date: **5/17/2023** SeqNo: **3512818** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

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#: **2305705**
26-May-23

Client: HILCORP ENERGY
Project: Flora Vista 1

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **SL96842** RunNo: **96842**
Prep Date: Analysis Date: **5/17/2023** SeqNo: **3512818** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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: 2305705 RcptNo: 1

Received By: Juan Rojas 5/12/2023 7:30:00 AM Juan Rojas

Completed By: Michelle Garcia 5/12/2023 10:53:11 AM Michelle Garcia

Reviewed By: JA 5-12-23 @

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☐ No ☑
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☑ No ☐ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐ HNO3
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
Adjusted? yes
Checked by: JA 5/12/23

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: 0.5ml of HNO3(7462) was added to samples 001B, 002B for pH<2. Filtered from samples unpreserved bottles. JA 5/12/23. Used 2 Filters from Lot FS6168. JA 5/12/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes	Morty		

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: Flora Vista 1

Project #:

Project Manager: Kate Kaufman

Sampler: Brandon Sinclair
On Ice: ☒ Yes ☐ No
\# of Coolers: 1 Marty
Cooler Temp (Including CF): 0.8+0.1=0.9

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2305705	Dissolved Mn and Fe 500ml HDPE*	BTEX 8260 40ml VOA HCl												
~~5-10~~		~~Water~~	~~MW-1~~	~~Various~~	~~Various~~		~~X~~	~~X~~												
5-10	1320	Water	MW-2	Various	Various	-001	X	X												
5-10	1230	Water	MW-3	Various	Various	-002	X	X												
		~~Water~~	~~MW-4~~	~~Various~~	~~Various~~		~~X~~	~~X~~												
		~~Water~~	~~MW-5~~	~~Various~~	~~Various~~		~~X~~	~~X~~												

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5-10	1840	[signature]	Chrt Wall		5/10/23	1840
5/11/23	1804	Chrt Wall	[signature]	Courier	5/12/23	7:30

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.

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.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 12, 2023

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

RE: Flora Vista 1 OrderNo.: 2309023

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/1/2023 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 don't hesitate to contact HEAL 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 **2309023**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** DW-1
Project: Flora Vista 1 **Collection Date:** 8/29/2023 11:30:00 AM
Lab ID: 2309023-001 **Matrix:** AQUEOUS **Received Date:** 9/1/2023 6:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	9/5/2023 12:54:25 PM
Manganese	ND	0.0020		mg/L	1	9/5/2023 12:54:25 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	9/11/2023 2:17:37 PM
Toluene	ND	1.0		µg/L	1	9/11/2023 2:17:37 PM
Ethylbenzene	ND	1.0		µg/L	1	9/11/2023 2:17:37 PM
Xylenes, Total	ND	1.5		µg/L	1	9/11/2023 2:17:37 PM
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	1	9/11/2023 2:17:37 PM
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	9/11/2023 2:17:37 PM
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	9/11/2023 2:17:37 PM
Surr: Toluene-d8	106	70-130		%Rec	1	9/11/2023 2:17:37 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#: **2309023**

12-Sep-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A99455**	RunNo: **99455**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630437** 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-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A99455**	RunNo: **99455**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630438** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0021	0.0020	0.002000	0	103	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A99455**	RunNo: **99455**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630439** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.2	85	115			
Manganese	0.49	0.0020	0.5000	0	98.9	85	115			

Sample ID: **2309023-001BMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **DW-1**	Batch ID: **A99455**	RunNo: **99455**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630519** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.3	70	130			
Manganese	0.50	0.0020	0.5000	0	99.2	70	130			

Sample ID: **2309023-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **DW-1**	Batch ID: **A99455**	RunNo: **99455**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630520** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	106	70	130	7.37	20	
Manganese	0.54	0.0020	0.5000	0	107	70	130	7.98	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309023**

12-Sep-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R99610**	RunNo: **99610**
Prep Date:	Analysis Date: **9/11/2023**	SeqNo: **3638346** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	18	1.0	20.00	0	92.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.7	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.0		10.00		89.6	70	130			

Sample ID: **2309023-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **DW-1**	Batch ID: **R99610**	RunNo: **99610**
Prep Date:	Analysis Date: **9/11/2023**	SeqNo: **3638355** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.8	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.5	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.8	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID: **2309023-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **DW-1**	Batch ID: **R99610**	RunNo: **99610**
Prep Date:	Analysis Date: **9/11/2023**	SeqNo: **3638356** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130	6.15	20	
Toluene	19	1.0	20.00	0	96.9	70	130	8.42	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		114	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R99610**	RunNo: **99610**
Prep Date:	Analysis Date: **9/11/2023**	SeqNo: **3638371** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

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#: **2309023**

12-Sep-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R99610**	RunNo: **99610**
Prep Date:	Analysis Date: **9/11/2023**	SeqNo: **3638371** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.5	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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: 2309023 RcptNo: 1

Received By: Tracy Casarrubias 9/1/2023 6:40:00 AM

Completed By: Tracy Casarrubias 9/1/2023 9:46:08 AM

Reviewed By: TM 9/1/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preserved added to bottles? Yes ☑ No ☐ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐ HNO3
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 1
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ (<2 or >12 unless noted) Adjusted? YES
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 ☐ Checked by: SCM 9/1/23

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:

From original volume provided, poured off ~125mL and filtered into 125mL HDPE bottle.(Filter Lot# FJ9623). Proceeded to add ~.40mL of HNO3 (Lot#7115) for proper pH- SCM 9/1/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.3	Good	Yes	Yogi		

Chain-of-Custody Record

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

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: Flora Vista 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No 4.0g

# of Coolers: 1

Cooler Temp(including CF): 5.3 - 0 = 5.3°C

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309023	Dissolved Mn and Fe 500ml HDPE*	BTEX 8260 40ml VOA HCl	
8-29	1130	Water	DW-1	Various	Various	001	X	X	
		~~Water~~	~~DW-2~~	~~Various~~	~~Various~~		~~X~~	~~X~~	aw

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8-31	1341				8/31/23	1341
8/31/23	1803			Via: courier	9/1/23	6:40

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.

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.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 03, 2023

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

RE: Flora Vista 1 OrderNo.: 2307A56

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/22/2023 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 don't hesitate to contact HEAL 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 **2307A56**
Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-2
Project: Flora Vista 1
Collection Date: 7/21/2023 12:40:00 PM
Lab ID: 2307A56-001 **Matrix:** AQUEOUS **Received Date:** 7/22/2023 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	7/25/2023 8:28:49 AM
Manganese	0.0023	0.0020		mg/L	1	7/25/2023 8:28:49 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**
Benzene	ND	1.0		µg/L	1	7/28/2023 5:08:00 PM
Toluene	ND	1.0		µg/L	1	7/28/2023 5:08:00 PM
Ethylbenzene	ND	1.0		µg/L	1	7/28/2023 5:08:00 PM
Xylenes, Total	ND	1.5		µg/L	1	7/28/2023 5:08:00 PM
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	7/28/2023 5:08:00 PM
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	7/28/2023 5:08:00 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	7/28/2023 5:08:00 PM
Surr: Toluene-d8	104	70-130		%Rec	1	7/28/2023 5:08:00 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2307A56**
Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-3
Project: Flora Vista 1
Collection Date: 7/21/2023 11:40:00 AM
Lab ID: 2307A56-002 **Matrix:** AQUEOUS **Received Date:** 7/22/2023 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	0.13	0.020		mg/L	1	7/25/2023 8:51:14 AM
Manganese	0.77	0.010	*	mg/L	5	7/25/2023 8:57:27 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**
Benzene	ND	1.0		µg/L	1	7/28/2023 5:33:00 PM
Toluene	ND	1.0		µg/L	1	7/28/2023 5:33:00 PM
Ethylbenzene	ND	1.0		µg/L	1	7/28/2023 5:33:00 PM
Xylenes, Total	ND	1.5		µg/L	1	7/28/2023 5:33:00 PM
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	7/28/2023 5:33:00 PM
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	7/28/2023 5:33:00 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	7/28/2023 5:33:00 PM
Surr: Toluene-d8	105	70-130		%Rec	1	7/28/2023 5:33:00 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 **2307A56**
Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-4
Project: Flora Vista 1
Collection Date: 7/21/2023 10:55:00 AM
Lab ID: 2307A56-003 **Matrix:** AQUEOUS **Received Date:** 7/22/2023 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	0.93	0.020	*	mg/L	1	7/25/2023 9:12:36 AM
Manganese	2.8	0.010	*	mg/L	5	7/25/2023 9:14:36 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**
Benzene	ND	1.0		µg/L	1	7/28/2023 5:58:00 PM
Toluene	ND	1.0		µg/L	1	7/28/2023 5:58:00 PM
Ethylbenzene	ND	1.0		µg/L	1	7/28/2023 5:58:00 PM
Xylenes, Total	ND	1.5		µg/L	1	7/28/2023 5:58:00 PM
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	7/28/2023 5:58:00 PM
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	7/28/2023 5:58:00 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	7/28/2023 5:58:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	7/28/2023 5:58:00 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 **2307A56**
Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-5
Project: Flora Vista 1
Collection Date: 7/21/2023 12:15:00 PM
Lab ID: 2307A56-004 **Matrix:** AQUEOUS **Received Date:** 7/22/2023 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	2.4	0.10	*	mg/L	5	7/25/2023 9:18:51 AM
Manganese	3.9	0.010	*	mg/L	5	7/25/2023 9:18:51 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **CCM**
Benzene	6.6	1.0		µg/L	1	7/28/2023 6:22:00 PM
Toluene	1.1	1.0		µg/L	1	7/28/2023 6:22:00 PM
Ethylbenzene	110	10		µg/L	10	7/31/2023 12:20:00 PM
Xylenes, Total	1100	15		µg/L	10	7/31/2023 12:20:00 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	7/28/2023 6:22:00 PM
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	7/28/2023 6:22:00 PM
Surr: Dibromofluoromethane	108	70-130		%Rec	1	7/28/2023 6:22:00 PM
Surr: Toluene-d8	122	70-130		%Rec	1	7/28/2023 6:22:00 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307A56**

03-Aug-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A98490**	RunNo: **98490**
Prep Date:	Analysis Date: **7/25/2023**	SeqNo: **3585433** 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-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A98490**	RunNo: **98490**
Prep Date:	Analysis Date: **7/25/2023**	SeqNo: **3585434** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A98490**	RunNo: **98490**
Prep Date:	Analysis Date: **7/25/2023**	SeqNo: **3585435** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Manganese	0.48	0.0020	0.5000	0	96.9	85	115			

Sample ID: **2307A56-001BMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-2**	Batch ID: **A98490**	RunNo: **98490**
Prep Date:	Analysis Date: **7/25/2023**	SeqNo: **3585440** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.6	70	130			
Manganese	0.49	0.0020	0.5000	0.002338	97.2	70	130			

Sample ID: **2307A56-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-2**	Batch ID: **A98490**	RunNo: **98490**
Prep Date:	Analysis Date: **7/25/2023**	SeqNo: **3585441** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.8	70	130	0.167	20	
Manganese	0.49	0.0020	0.5000	0.002338	97.0	70	130	0.216	20	

Sample ID: **2307A56-002BMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-3**	Batch ID: **A98490**	RunNo: **98490**
Prep Date:	Analysis Date: **7/25/2023**	SeqNo: **3585450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307A56**

03-Aug-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **2307A56-002BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-3** Batch ID: **A98490** RunNo: **98490**
Prep Date: Analysis Date: **7/25/2023** SeqNo: **3585450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.63	0.020	0.5000	0.1344	98.3	70	130			

Sample ID: **2307A56-002BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-3** Batch ID: **A98490** RunNo: **98490**
Prep Date: Analysis Date: **7/25/2023** SeqNo: **3585451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.62	0.020	0.5000	0.1344	98.1	70	130	0.234	20	

Sample ID: **2307A56-002BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-3** Batch ID: **A98490** RunNo: **98490**
Prep Date: Analysis Date: **7/25/2023** SeqNo: **3585453** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	3.2	0.010	2.500	0.7718	97.6	70	130			

Sample ID: **2307A56-002BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-3** Batch ID: **A98490** RunNo: **98490**
Prep Date: Analysis Date: **7/25/2023** SeqNo: **3585454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	3.3	0.010	2.500	0.7718	99.3	70	130	1.32	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307A56**

03-Aug-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **100ng lcs4** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **LCSW** Batch ID: **SL98563** RunNo: **98563**

Prep Date: Analysis Date: **7/28/2023** SeqNo: **3590776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBW** Batch ID: **SL98563** RunNo: **98563**

Prep Date: Analysis Date: **7/28/2023** SeqNo: **3590777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **LCSW** Batch ID: **SL98599** RunNo: **98599**

Prep Date: Analysis Date: **7/31/2023** SeqNo: **3590996** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		120	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBW** Batch ID: **SL98599** RunNo: **98599**

Prep Date: Analysis Date: **7/31/2023** SeqNo: **3590997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		115	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307A56**

03-Aug-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL98599**	RunNo: **98599**
Prep Date:	Analysis Date: **7/31/2023**	SeqNo: **3590997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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: 2307A56 RcptNo: 1

Received By: Tracy Casarrubias 7/22/2023 8:45:00 AM

Completed By: Tracy Casarrubias 7/22/2023 9:18:56 AM

Reviewed By: JN 7/24/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☑ No ☐ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ 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 ☐ # of preserved bottles checked for pH: 4 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? yes
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 ☐ Checked by: TMC 7/22/23

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 ~125mL from original volume provided for samples 001A-004A and fiiltered them. (Lot# 0968 x6). Proceeded to add 0.40mL of HNO3 (Chem#7162) for proper pH- TMC 7/22/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.6	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: Flora Vista 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No 4093

# of Coolers: 1

Cooler Temp(including CF): 3.6 - 0 = 3.6 °C

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. 2307A56	Dissolved Mn and Fe 500ml HDPE*	BTEX 8260 40ml VOA HCl
7-21	~~—~~	~~Water~~	~~MW-1~~	Various	Various		X	X
	1240	Water	MW-2	Various	Various	001	X	X
	1140	Water	MW-3	Various	Various	002	X	X
	1055	Water	MW-4	Various	Various	003	X	X
	1215	Water	MW-5	Various	Various	004	X	X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7-21	1649				7/21/23	1645
7/21/23	1720			Courier	7/22/23	8:45

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.

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

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

November 03, 2023

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

RE: Flora Vista 1 OrderNo.: 2310A74

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 4 sample(s) on 10/21/2023 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 **2310A74**
Date Reported: **11/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-2
Project: Flora Vista 1
Collection Date: 10/20/2023 12:45:00 PM
Lab ID: 2310A74-001 **Matrix:** AQUEOUS **Received Date:** 10/21/2023 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	10/26/2023 9:04:02 AM
Manganese	0.71	0.0020	*	mg/L	1	10/26/2023 9:04:02 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	10/30/2023 1:52:52 PM
Toluene	ND	1.0		µg/L	1	10/30/2023 1:52:52 PM
Ethylbenzene	ND	1.0		µg/L	1	10/30/2023 1:52:52 PM
Xylenes, Total	ND	1.5		µg/L	1	10/30/2023 1:52:52 PM
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	10/30/2023 1:52:52 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	10/30/2023 1:52:52 PM
Surr: Dibromofluoromethane	98.9	70-130		%Rec	1	10/30/2023 1:52:52 PM
Surr: Toluene-d8	111	70-130		%Rec	1	10/30/2023 1:52:52 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 **2310A74**
Date Reported: **11/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-3
Project: Flora Vista 1 **Collection Date:** 10/20/2023 11:30:00 AM
Lab ID: 2310A74-002 **Matrix:** AQUEOUS **Received Date:** 10/21/2023 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	0.071	0.020		mg/L	1	10/26/2023 9:08:18 AM
Manganese	0.75	0.0020	*	mg/L	1	10/26/2023 9:08:18 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	10/30/2023 3:14:38 PM
Toluene	19	1.0		µg/L	1	10/30/2023 3:14:38 PM
Ethylbenzene	ND	1.0		µg/L	1	10/30/2023 3:14:38 PM
Xylenes, Total	ND	1.5		µg/L	1	10/30/2023 3:14:38 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	10/30/2023 3:14:38 PM
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	10/30/2023 3:14:38 PM
Surr: Dibromofluoromethane	105	70-130		%Rec	1	10/30/2023 3:14:38 PM
Surr: Toluene-d8	101	70-130		%Rec	1	10/30/2023 3:14:38 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 **2310A74**
Date Reported: **11/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-4
Project: Flora Vista 1 **Collection Date:** 10/20/2023 11:00:00 AM
Lab ID: 2310A74-003 **Matrix:** AQUEOUS **Received Date:** 10/21/2023 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	ND	0.020		mg/L	1	10/26/2023 9:12:31 AM
Manganese	2.8	0.010	*	mg/L	5	10/26/2023 9:22:16 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	10/30/2023 3:41:59 PM
Toluene	ND	1.0		µg/L	1	10/30/2023 3:41:59 PM
Ethylbenzene	ND	1.0		µg/L	1	10/30/2023 3:41:59 PM
Xylenes, Total	ND	1.5		µg/L	1	10/30/2023 3:41:59 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/30/2023 3:41:59 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/30/2023 3:41:59 PM
Surr: Dibromofluoromethane	105	70-130		%Rec	1	10/30/2023 3:41:59 PM
Surr: Toluene-d8	112	70-130		%Rec	1	10/30/2023 3:41:59 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 **2310A74**
Date Reported: **11/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-5
Project: Flora Vista 1
Collection Date: 10/20/2023 12:10:00 PM
Lab ID: 2310A74-004 **Matrix:** AQUEOUS **Received Date:** 10/21/2023 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**
Iron	1.1	0.10	*	mg/L	5	10/26/2023 9:26:20 AM
Manganese	3.8	0.010	*	mg/L	5	10/26/2023 9:26:20 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	14	2.0		µg/L	2	10/30/2023 4:36:23 PM
Toluene	ND	2.0		µg/L	2	10/30/2023 4:36:23 PM
Ethylbenzene	250	20		µg/L	20	10/31/2023 1:51:00 PM
Xylenes, Total	2200	30		µg/L	20	10/31/2023 1:51:00 PM
Surr: 1,2-Dichloroethane-d4	75.7	70-130		%Rec	2	10/30/2023 4:36:23 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	2	10/30/2023 4:36:23 PM
Surr: Dibromofluoromethane	78.0	70-130		%Rec	2	10/30/2023 4:36:23 PM
Surr: Toluene-d8	95.1	70-130		%Rec	2	10/30/2023 4:36:23 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#: **2310A74**

03-Nov-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A100762**	RunNo: **100762**
Prep Date:	Analysis Date: **10/26/2023**	SeqNo: **3695802** 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-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A100762**	RunNo: **100762**
Prep Date:	Analysis Date: **10/26/2023**	SeqNo: **3695803** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0021	0.0020	0.002000	0	103	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A100762**	RunNo: **100762**
Prep Date:	Analysis Date: **10/26/2023**	SeqNo: **3695804** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.54	0.020	0.5000	0	107	85	115			
Manganese	0.52	0.0020	0.5000	0	104	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2310A74**

03-Nov-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL100843**	RunNo: **100843**
Prep Date:	Analysis Date: **10/30/2023**	SeqNo: **3699917** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.6	70	130			
Toluene	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **2310a74-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **MW-2**	Batch ID: **SL100843**	RunNo: **100843**
Prep Date:	Analysis Date: **10/30/2023**	SeqNo: **3699919** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	23	1.0	20.00	0	116	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		125	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID: **2310a74-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **MW-2**	Batch ID: **SL100843**	RunNo: **100843**
Prep Date:	Analysis Date: **10/30/2023**	SeqNo: **3699920** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130	1.25	20	
Toluene	17	1.0	20.00	0	84.6	70	130	31.7	20	R
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	
Surr: Toluene-d8	8.6		10.00		86.3	70	130	0	0	

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL100843**	RunNo: **100843**
Prep Date:	Analysis Date: **10/30/2023**	SeqNo: **3699929** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2310A74**

03-Nov-23

Client: HILCORP ENERGY

Project: Flora Vista 1

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBW** Batch ID: **SL100843** RunNo: **100843**

Prep Date: Analysis Date: **10/30/2023** SeqNo: **3699929** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.1	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **LCSW** Batch ID: **SL100850** RunNo: **100850**

Prep Date: Analysis Date: **10/31/2023** SeqNo: **3701697** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.3	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBW** Batch ID: **SL100850** RunNo: **100850**

Prep Date: Analysis Date: **10/31/2023** SeqNo: **3701698** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.6	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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: 2310A74 RcptNo: 1

Received By: **Tracy Casarrubias** 10/21/2023 6:35:00 AM

Completed By: **Tracy Casarrubias** 10/21/2023 7:27:29 AM

Reviewed By: JA 10.23.23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preserved added to bottles? Yes ☑ No ☐ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐ HNO3
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: 4 (<2 or >12 unless noted)
Adjusted? YES
Checked by: SCM 10/23/23

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:

From original voleme provided, ~125mL was poured off and filtered to create samples 001B-004B. (Lot# FJ0778 x 6).
Proceeded to add ~.40mL of HNO3 (Chem#7281) to 001B-004B for proper pH- SCM 10/23/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	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:

Flora Vista 1

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No yogi

# of Coolers: 1

Cooler Temp(including CF): 0.8 - 0 = 0.8 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2310A74	Dissolved Mn and Fe 500ml HDPE*	BTEX 8260 40ml VOA HCl													
~~—~~	~~—~~	~~Water~~	~~MW-1~~	~~Various~~	~~Various~~		~~X~~	~~X~~	DW												
10-20	1245	Water	MW-2	Various	Various	001	X	X													
	1130	Water	MW-3	Various	Various	002	X	X													
	1100	Water	MW-4	Various	Various	003	X	X													
	1210	Water	MW-5	Various	Various	004	X	X													

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10-20	1636				10/20/23	1636
10/20/23	1800			courier	10/21/23	6:35

Remarks: *Dissolved Mn and Fe are to be filtered and preserved in the lab.

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.

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 326305

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 326305
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2023 Annual Groundwater Monitoring Report for Flora Vista #1: Content Satisfactory 1. Continue groundwater monitoring for all wells, including for constituents iron and manganese. Sampling frequency may be reduced to semi-annual basis. 2. All COCs except for Mn may be suspended from sampling analysis from MW-2. 3. Continue to conduct sample analysis for iron in MW-3 4. Groundwater sampling for wells DW-1 and DW-2 may be suspended 5. If wells continue to convey too low volume of groundwater for sample collection, Hilcorp may try purging the three casing volumes first, return after 24 hours, then collect the sample. 6 Submit the 2024 Annual Groundwater Report by April 2025.	5/29/2024