

REVIEWED

By Mike Buchanan at 10:58 am, May 24, 2024

**ENSOLUM**

March 29, 2023

New Mexico Oil Conservation Division

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

Re: 2022 Annual Groundwater Monitoring Report
Bruington Gas Com #1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: nJK1201238485

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2022 Annual Groundwater Monitoring Report* to the New Mexico Oil Conservation Division (NMOCD) to document groundwater monitoring activities conducted in wells MW-2R, Bruington Gas Com #1 natural gas production site (Site) during 2022. The Site is located within Unit Letter E, Section 14 within Township 29 north and Range 11 West, San Juan County, New Mexico (Figure 1).

There are currently nine monitoring wells onsite which are assessed for ORP semi-annually for groundwater elevations. All monitoring wells are sampled and DO for effectiveness. This report presents the results of the 2022 monitoring events.

SITE BACKGROUND

Comprehensive Site background history has been detailed by previous consultants' annual groundwater monitoring reports, which are available on the NMOCD database.

In December of 2017, Hilcorp acquired the Site from XTO Energy Inc. and has continued to perform semi-annual monitoring of groundwater elevations and annual sampling of all monitoring wells. Summaries of groundwater elevation data and laboratory analytical results from historical and current groundwater monitoring are presented in Table 1 and Table 2, respectively.

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 micrograms per liter (µg/L):

- Benzene: 5 µg/L
- Toluene: 1,000 µg/L
- Ethylbenzene: 700 µg/L
- Total Xylenes: 620 µg/L

Review of the 2022 Annual Groundwater Monitoring Report for Bruington Gas Com #1: Content Satisfactory

1. Continue to conduct gauging and annual sampling of all monitoring wells on Site.
2. Introduce ORC clocks in wells MW-2R, MW-5, MW-6, MW-7, MW-8.
3. Complete assessment for ORP and DO for effectiveness.
4. Submit the 2023 annual groundwater report (if not already submitted) and, submit the 2024 Annual Groundwater Reports by April 1, 2025.

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater-level measurements were collected in July and December 2022 within all wells, and samples were collected in December 2022 from wells MW-1R, MW-2R, MW-5, MW-6, MW-8, and MW-9. Static groundwater-level monitoring included recording depth-to-groundwater using an 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. Measured depths-to-groundwater and calculated groundwater elevations are presented in Table 1. The inferred groundwater flow direction is generally to the south in the northern half of the site, and variable throughout the year, generally flowing to the east or to the southwest in the southern half of the site as indicated on the groundwater potentiometric surface maps presented in Figures 2 and 3. The groundwater flow direction in the southern half of the site is likely dependent on the seasonal fluctuations of irrigation water running through the Citizen's Irrigation Ditch situated to the west of the Site.

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, electrical conductivity, and total dissolved solids were collected during the purging process.

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. Containers were immediately sealed and packed on ice to preserve samples. Samples were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United State Environmental Protection Agency (EPA) Method 8260B. 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

During the December 2022 sampling event, wells MW-3R and MW-4 were dry, and MW-7 was not located. All BTEX constituents were detected in groundwater from well MW-6 at concentrations exceeding the NMWQCC standards. Benzene, ethylbenzene, and total xylenes were detected in groundwater from well MW-5 at concentrations exceeding the NMWQCC standards. Benzene, toluene, and total xylenes were detected in groundwater from wells MW-2R and MW-8 at concentrations exceeding the NMWQCC standards. BTEX was not detected in groundwater above the NMWQCC standards in wells MW-1R and MW-9. Analytical results are summarized in Table 2 and depicted on Figure 3, with complete laboratory analytical reports attached as Appendix A.

CONCLUSIONS

BTEX concentrations have not been detected above laboratory reporting limits in wells MW-1R, MW-3R, and MW-4 in more than 10 years, although MW-3R and MW-4 were dry and not sampled in 2022. BTEX concentrations have not exceeded the NMWQCC standards in well MW-9 for the past 4 years. Three or more BTEX constituents detected in groundwater in wells MW-2R, MW-5, MW-6, and MW-8 had concentrations exceeding NMWQCC standards in the December 2022 sampling event. Benzene concentrations are generally highest in wells MW-5 and MW-6. Overall, concentrations of BTEX in monitoring wells at the Site remain similar to previous years.

Groundwater flow direction and elevation fluctuations appear to be controlled by the presence or absence of water in the Citizen's Irrigation Ditch to the west of the Site. Wells closer to the irrigation ditch are influenced, while MW-9 at the north end of the site is upgradient and is less affected.

Soil at the Site has been impacted by releases of petroleum hydrocarbons from three known sources (former Amoco blowdown pit, former Amoco separator pit, and former El Paso Field Services dehydrator pit). Groundwater analytical results indicate source material is still in contact with groundwater, resulting in elevated concentrations of BTEX exceeding NMWQCC standards in MW-2R, MW-5, MW-6, MW-8 and likely MW-7 based on previous historical results. Dissolved BTEX concentrations in MW-1R and MW-9 remain compliant with the NMWQCC standards. Although MW-3 and MW-4 were dry and not sampled in 2022, analytical results have been compliant with the NMWQCC standards for more than 10 years.

RECOMMENDATIONS

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

- Continue semi-annual gauging and annual sampling of all monitoring wells on Site.
- Install Oxygen Release Compound (ORC®) socks in wells MW-2R, MW-5, MW-6, MW-7, and MW-8.
- Field screen for oxidation-reduction potential (ORP) and dissolved oxygen (DO) values at all wells during semi-annual gauging and annual sampling events to assess if the socks are effective at contributing to an aerobic environment, which stimulates petroleum hydrocarbon biodegradation over time.

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

Sincerely,

Ensolum, LLC



Stuart Hyde, LG
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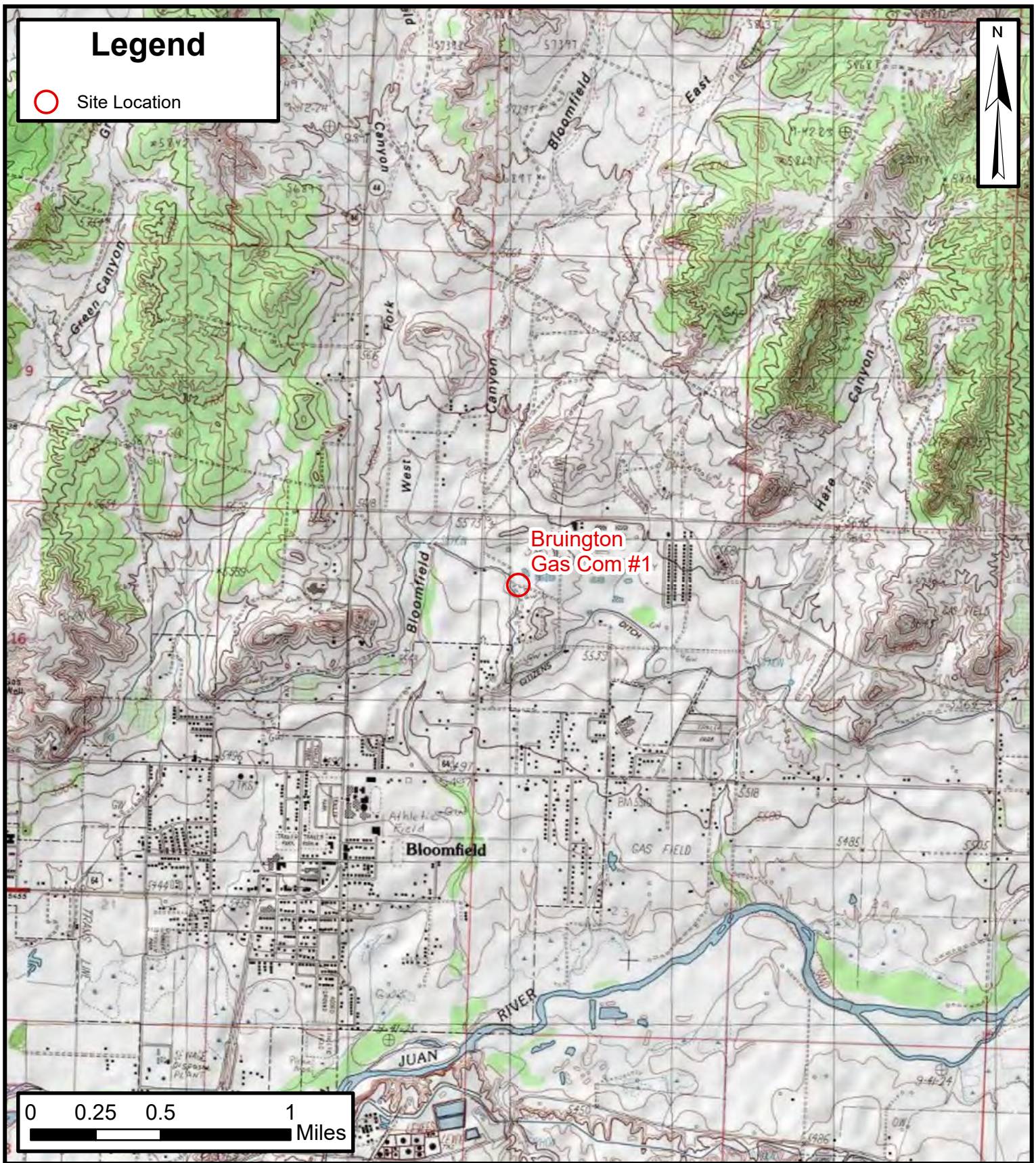
Daniel R. Moir, PG
Senior Managing Geologist
(303) 887-2946
dmoir@ensolum.com

Attachments:

Figure 1	Site Location Map
Figure 2	July 2022 Groundwater Elevation Map
Figure 3	December 2022 Groundwater Analytical Results and Elevation Map
Table 1	Groundwater Elevation Summary
Table 2	Groundwater Analytical Results
Appendix A	Laboratory Analytical Reports



FIGURES



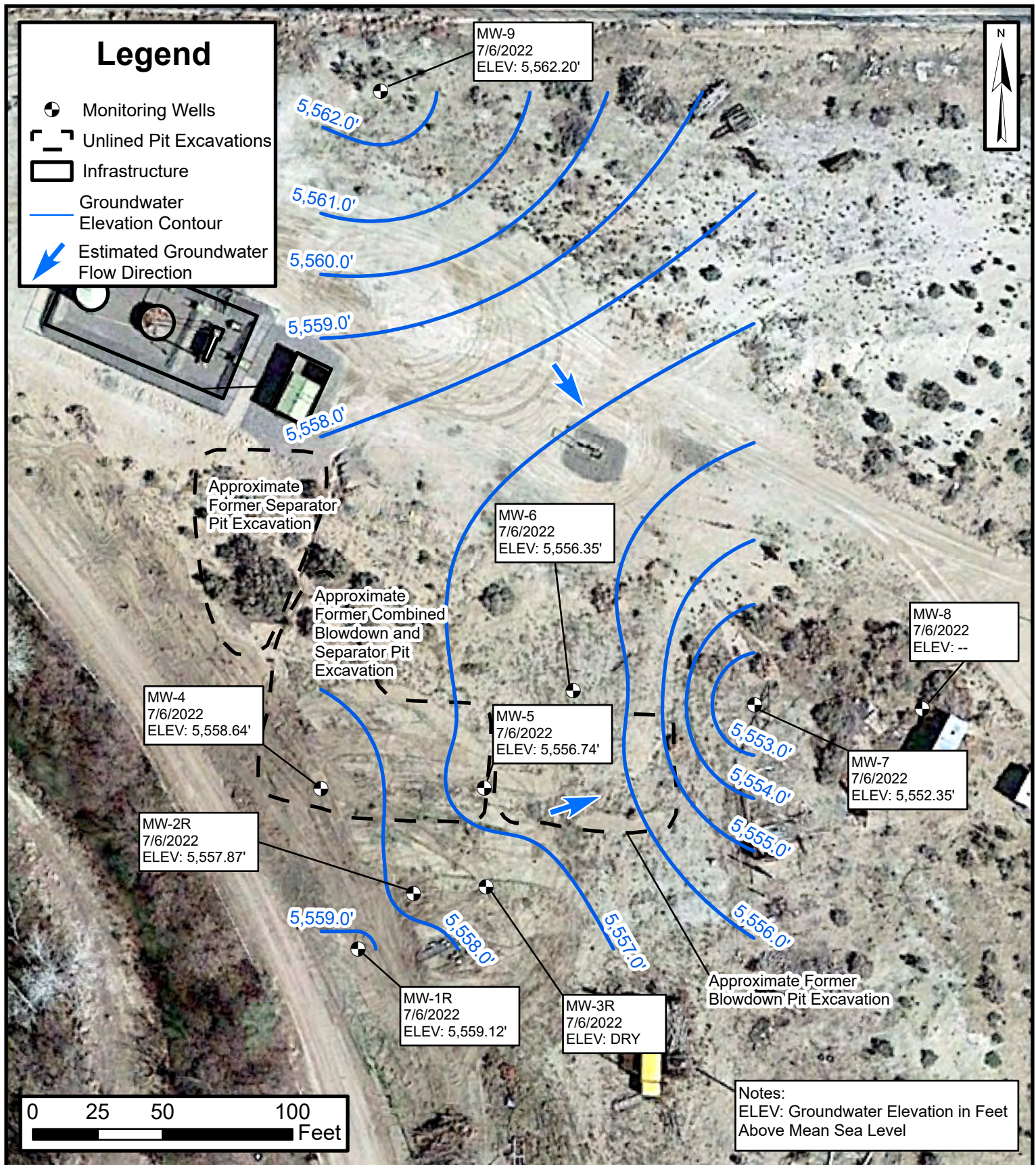
Site Location Map

Bruington Gas Com #1
 Hilcorp Energy Company
 36.728985, -107.967408
 San Juan County, New Mexico

FIGURE

1



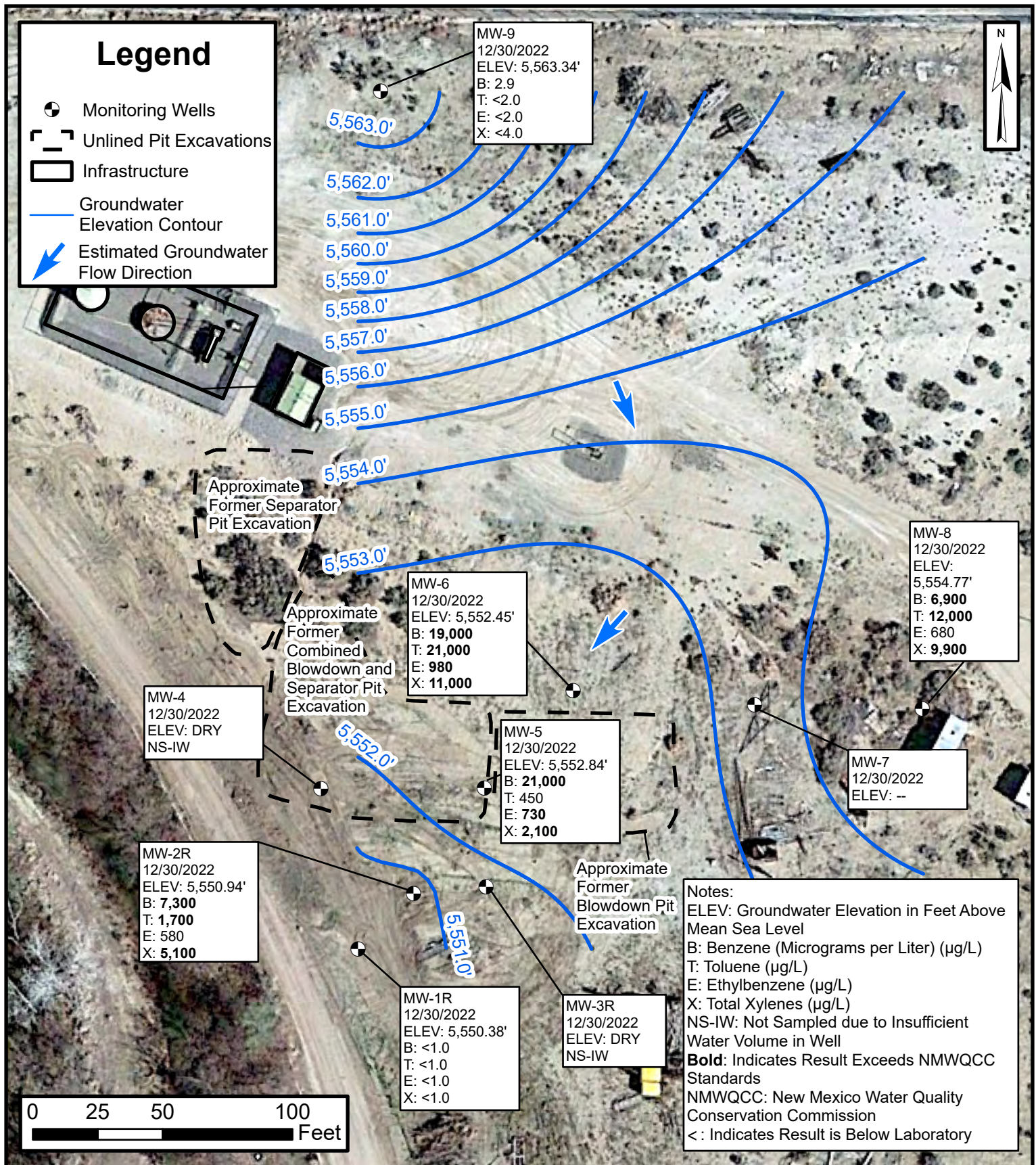


Groundwater Elevation (July 2022)

Bruington Gas Com #1
Hilcorp Energy Company
36.728985, -107.967408
San Juan County, New Mexico

FIGURE
2

ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants



Groundwater Elevation (December 2022)

Bruington Gas Com #1
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FIGURE
3



TABLES



TABLE 1
GROUNDWATER ELEVATION SUMMARY
 Bruington Gas Com #1
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 San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-1	Not Measured	7/6/1996	--	7.00	--	-
MW-1R	5,566.63	5/5/1999	--	10.55	--	5,556.08
		6/29/2000	--	11.14	--	5,555.49
		5/17/2001	--	11.33	--	5,555.30
		9/24/2001	--	9.84	--	5,556.79
		7/27/2002	--	9.93	--	5,556.70
		6/25/2003	--	11.45	--	5,555.18
		8/25/2003	--	12.14	--	5,554.49
		4/25/2006	--	11.55	--	5,555.08
		11/10/2006	--	--	--	--
		11/27/2006	--	13.17	--	5,553.46
		2/23/2007	--	14.24	--	5,552.39
		3/28/2007	--	16.78	--	5,549.85
		4/11/2007	--	13.51	--	5,553.12
		6/13/2007	--	7.51	--	5,559.12
		8/21/2007	--	7.20	--	5,559.43
		9/25/2007	--	7.07	--	5,559.56
		10/30/2007	--	7.66	--	5,558.97
		11/27/2007	--	11.50	--	5,555.13
		12/20/2007	--	12.97	--	5,553.66
		2/26/2008	--	--	--	--
		3/12/2008	--	13.18	--	5,553.45
		4/7/2008	--	--	--	--
		6/2/2008	--	7.53	--	5,559.10
		8/12/2008	--	6.77	--	5,559.86
		9/22/2008	--	7.76	--	5,558.87
		10/22/2008	--	6.39	--	5,560.24
		12/5/2008	--	11.26	--	5,555.37
		2/6/2009	--	12.55	--	5,554.08
		3/3/2009	--	15.24	--	5,551.39
		6/24/2009	--	6.52	--	5,560.11
		9/15/2009	--	6.98	--	5,559.65
		12/7/2009	--	11.22	--	5,555.41
		3/3/2010	--	15.17	--	5,551.46
		6/21/2010	--	6.74	--	5,559.89
		9/9/2010	--	7.70	--	5,558.93
		1/13/2011	--	13.70	--	5,552.93
		3/2/2011	--	13.69	--	5,552.94
		6/15/2011	--	7.04	--	5,559.59
		12/15/2011	--	12.24	--	5,554.39
		6/14/2012	--	7.41	--	5,559.22
		12/4/2012	--	11.45	--	5,555.18
		6/18/2013	--	7.15	--	5,559.48
		12/17/2013	--	12.13	--	5,554.50



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Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-1R	5,566.63	6/18/2014	--	7.00	--	5,559.63
		12/10/2014	--	11.88	--	5,554.75
		6/8/2015	--	6.39	--	5,560.24
		12/14/2015	--	12.45	--	5,554.18
		2/19/2016	--	16.04	--	5,550.59
		6/13/2016	--	8.90	--	5,557.73
		12/13/2016	--	11.85	--	5,554.78
		6/28/2017	--	8.07	--	5,558.56
		12/5/2017	--	11.61	--	5,555.02
		6/27/2018	--	7.27	--	5,559.36
		12/11/2018	--	12.75	--	5,553.88
		6/18/2019	--	8.52	--	5,558.11
		12/9/2019	--	13.85	--	5,552.78
		6/11/2020	--	7.25	--	5,559.38
		12/16/2020	--	13.47	--	5,553.16
		6/21/2021	--	7.49	--	5,559.14
		12/16/2021	--	12.84	--	5,553.79
		7/6/2022	--	7.51	--	5,559.12
		12/30/2022	--	16.25	--	5,550.38
MW-2	5,567.99	6/7/1996	--	10.12	--	5,557.87
		6/27/1997	--	12.65	--	5,555.34
MW-2R	5,567.99	6/12/1998	--	11.00	--	5,556.99
		5/5/1999	--	10.78	--	5,557.21
		6/29/2000	--	11.50	--	5,556.49
		5/17/2001	--	12.12	--	5,555.87
		9/24/2001	--	10.08	--	5,557.91
		6/27/2002	--	9.77	--	5,558.22
		6/25/2003	--	11.53	--	5,556.46
		6/18/2004	--	12.07	--	5,555.92
		6/27/2005	--	10.14	--	5,557.85
		4/25/2006	--	11.64	--	5,556.35
		11/10/2006	--	--	--	--
		11/27/2006	--	11.32	--	5,556.67
		2/23/2007	--	12.55	--	5,555.44
		3/28/2007	--	14.72	--	5,553.27
		4/11/2007	--	12.79	--	5,555.20
		6/13/2007	--	9.94	--	5,558.05
		8/21/2007	--	9.36	--	5,558.63
		9/25/2007	--	9.33	--	5,558.66
		10/30/2007	--	9.45	--	5,558.54
		11/27/2007	--	12.02	--	5,555.97



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MW-2R	5,567.99	12/20/2007	--	13.13	--	5,554.86
		2/26/2008	--	--	--	--
		3/12/2008	--	13.51	--	5,554.48
		4/7/2008	--	--	--	--
		6/2/2008	--	10.07	--	5,557.92
		8/12/2008	--	9.38	--	5,558.61
		9/22/2008	--	10.29	--	5,557.70
		10/22/2008	--	9.10	--	5,558.89
		12/5/2008	--	12.05	--	5,555.94
		2/6/2009	--	13.40	--	5,554.59
		3/3/2009	--	15.64	--	5,552.35
		6/24/2009	--	9.16	--	5,558.83
		9/15/2009	--	8.37	--	5,559.62
		12/7/2009	--	11.81	--	5,556.18
		3/3/2010	--	15.41	--	5,552.58
		6/21/2010	--	9.46	--	5,558.53
		9/9/2010	--	9.24	--	5,558.75
		1/13/2011	--	14.42	--	5,553.57
		3/2/2011	--	14.76	--	5,553.23
		6/15/2011	--	9.42	--	5,558.57
		12/15/2011	--	12.99	--	5,555.00
		6/14/2012	--	9.94	--	5,558.05
		12/4/2012	--	12.03	--	5,555.96
		6/18/2013	--	9.80	--	5,558.19
		12/17/2013	--	12.69	--	5,555.30
		6/18/2014	--	9.64	--	5,558.35
		12/10/2014	--	12.61	--	5,555.38
		6/8/2015	--	9.26	--	5,558.73
		12/14/2015	--	12.91	--	5,555.08
		2/19/2016	--	16.56	--	5,551.43
		6/13/2016	--	10.29	--	5,557.70
		12/13/2016	--	12.55	--	5,555.44
		6/28/2017	--	10.53	--	5,557.46
		12/5/2017	--	12.64	--	5,555.35
		6/27/2018	--	10.19	--	5,557.80
		12/11/2018	--	13.63	--	5,554.36
		6/18/2019	--	11.13	--	5,556.86
		12/9/2019	--	14.52	--	5,553.47
		6/11/2020	--	10.21	--	5,557.78
		12/16/2020	--	14.09	--	5,553.90



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Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-2R	5,567.99	6/21/2021	--	9.98	--	5,558.01
		12/16/2021	--	13.47	--	5,554.52
		7/6/2022	--	10.12	--	5,557.87
		12/30/2022	--	17.05	--	5,550.94
MW-3	Not Measured	6/7/1996	--	13.05	--	--
		5/5/1999	--	13.64	--	--
		6/29/2000	--	13.52	--	--
		5/17/2001	--	14.51	--	--
		9/24/2001	--	12.15	--	--
MW-3R	5,569.90	8/25/2003	--	11.81	--	5,558.09
		11/19/2003	--	12.28	--	5,557.62
		4/25/2006	--	12.56	--	5,557.34
		11/10/2006	--	--	--	--
		11/27/2006	--	12.60	--	5,557.30
		2/23/2007	--	14.33	--	5,555.57
		3/28/2007	--	15.83	--	5,554.07
		4/11/2007	--	14.99	--	5,554.91
		6/13/2007	--	--	--	--
		10/30/2007	--	--	--	--
		11/27/2007	--	13.14	--	5,556.76
		12/20/2007	--	14.25	--	5,555.65
		2/26/2008	--	--	--	--
		3/12/2008	--	15.23	--	5,554.67
		4/7/2008	--	--	--	--
		6/2/2008	--	12.07	--	5,557.83
		8/12/2008	--	11.15	--	5,558.75
		9/22/2008	--	11.86	--	5,558.04
		10/22/2008	--	11.80	--	5,558.10
		12/5/2008	--	13.23	--	5,556.67
		2/6/2009	--	14.82	--	5,555.08
		3/3/2009	--	16.37	--	5,553.53
		6/24/2009	--	11.52	--	5,558.38
		9/15/2009	--	10.66	--	5,559.24
		12/7/2009	--	12.63	--	5,557.27
		3/3/2010	--	16.09	--	5,553.81
		6/21/2010	--	11.59	--	5,558.31
		9/9/2010	--	11.18	--	5,558.72
		1/13/2011	--	16.77	--	5,553.13
	5,571.40*	3/2/2011	--	17.21	--	5,554.19
		6/15/2011	--	13.42	--	5,557.98



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MW-3R	5,571.40*	12/15/2011	--	15.22	--	5,556.18
		6/14/2012	--	13.80	--	5,557.60
		12/4/2012	--	14.82	--	5,556.58
		6/18/2013	--	13.63	--	5,557.77
		12/17/2013	--	15.36	--	5,556.04
		6/18/2014	--	13.37	--	5,558.03
		12/10/2014	--	15.71	--	5,555.69
		6/8/2015	--	13.22	--	5,558.18
		12/14/2015	--	14.94	--	5,556.46
		2/19/2016	--	18.38	--	5,553.02
		6/13/2016	--	14.38	--	5,557.02
		12/13/2016	--	15.25	--	5,556.15
		6/28/2017	--	14.07	--	5,557.33
		12/5/2017	--	15.34	--	5,556.06
		6/27/2018	--	14.06	--	5,557.34
		12/11/2018	--	16.14	--	5,555.26
		6/18/2019	--	15.23	--	5,556.17
		12/9/2019	--	--	--	--
		6/11/2020	--	15.03	--	5,556.37
		12/16/2020	--	--	--	--
		6/21/2021	--	--	--	--
		12/16/2021	--	--	--	--
		7/6/2022	Dry			
		12/30/2022	Dry			
MW-4	5,568.45	5/17/2001	--	10.88	--	5,557.57
		4/25/2006	--	11.11	--	5,557.34
		11/10/2006	--	--	--	--
		11/27/2006	--	12.41	--	5,556.04
		2/23/2007	--	13.62	--	5,554.83
		3/28/2007	--	16.17	--	5,552.28
		4/11/2007	--	13.34	--	5,555.11
		6/13/2007	--	9.87	--	5,558.58
		8/21/2007	--	9.35	--	5,559.10
		9/25/2007	--	9.24	--	5,559.21
		10/30/2007	--	9.75	--	5,558.70
		11/27/2007	--	13.43	--	5,555.02
		12/20/2007	--	14.91	--	5,553.54
		2/26/2008	--	--	--	--
		3/12/2008	--	15.09	--	5,553.36
		4/7/2008	--	--	--	--
		6/2/2008	--	9.59	--	5,558.86



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MW-4	5,568.45	8/12/2008	--	8.97	--	5,559.48
		9/22/2008	--	9.96	--	5,558.49
		10/22/2008	--	8.53	--	5,559.92
		12/5/2008	--	13.21	--	5,555.24
		2/6/2009	--	14.35	--	5,554.10
		3/3/2009	--	17.06	--	5,551.39
		6/24/2009	--	8.10	--	5,560.35
		9/15/2009	--	8.17	--	5,560.28
		12/7/2009	--	13.11	--	5,555.34
		3/3/2010	--	17.08	--	5,551.37
		6/21/2010	--	9.00	--	5,559.45
		9/9/2010	--	8.83	--	5,559.62
		1/13/2011	--	15.63	--	5,552.82
		3/2/2011	--	15.65	--	5,552.80
		6/15/2011	--	9.23	--	5,559.22
		12/15/2011	--	14.16	--	5,554.29
		6/14/2012	--	9.71	--	5,558.74
		12/4/2012	--	13.39	--	5,555.06
		6/18/2013	--	9.55	--	5,558.90
		12/17/2013	--	14.13	--	5,554.32
		6/18/2014	--	9.48	--	5,558.97
		12/10/2014	--	13.87	--	5,554.58
		6/8/2015	--	8.81	--	5,559.64
		12/14/2015	--	14.31	--	5,554.14
		2/19/2016	--	17.94	--	5,550.51
		6/13/2016	--	10.00	--	5,558.45
		12/13/2016	--	13.85	--	5,554.60
		6/28/2017	--	10.50	--	5,557.95
		12/5/2017	--	13.70	--	5,554.75
		6/27/2018	--	9.70	--	5,558.75
		12/11/2018	--	14.85	--	5,553.60
		6/18/2019	--	11.12	--	5,557.33
		12/9/2019	--	15.94	--	5,552.51
		6/11/2020	--	9.70	--	5,558.75
		12/16/2020	--	15.55	--	5,552.90
		6/21/2021	--	9.99	--	5,558.46
		12/16/2021	--	14.91	--	5,553.54
		7/6/2022	--	9.81	--	5,558.64
		12/30/2022	Dry			



TABLE 1
GROUNDWATER ELEVATION SUMMARY

Bruington Gas Com #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-5	5,572.07	5/17/2001	--	16.00	--	5,556.07
		9/24/2001	--	13.70	--	5,558.37
		6/27/2002	--	13.83	--	5,558.24
		6/25/2003	--	15.73	--	5,556.34
		6/18/2004	--	15.82	--	5,556.25
		6/27/2005	--	14.21	--	5,557.86
		4/25/2006	--	16.21	--	5,555.86
		11/10/2006	--	--	--	--
		11/27/2006	--	15.24	--	5,556.83
		2/23/2007	--	18.92	--	5,553.15
		3/28/2007	--	18.63	--	5,553.44
		4/11/2007	--	17.48	--	5,554.59
		6/13/2007	--	14.17	--	5,557.90
		8/21/2007	--	14.12	--	5,557.95
		9/25/2007	--	13.38	--	5,558.69
		10/30/2007	--	13.57	--	5,558.50
		11/27/2007	--	16.13	--	5,555.94
		12/20/2007	--	17.34	--	5,554.73
		2/26/2008	--	--	--	--
		3/12/2008	--	17.75	--	5,554.32
		4/7/2008	--	--	--	--
		6/2/2008	--	13.92	--	5,558.15
		8/12/2008	--	12.99	--	5,559.08
		9/22/2008	--	13.80	--	5,558.27
		10/22/2008	--	12.77	--	5,559.30
		12/5/2008	--	15.93	--	5,556.14
		2/6/2009	--	17.33	--	5,554.74
		3/3/2009	--	19.26	--	5,552.81
		6/24/2009	--	13.34	--	5,558.73
		9/15/2009	--	12.56	--	5,559.51
		12/7/2009	--	15.71	--	5,556.36
		3/3/2010	--	19.29	--	5,552.78
		6/21/2010	--	13.61	--	5,558.46
		9/9/2010	--	13.03	--	5,559.04
		1/13/2011	--	18.08	--	5,553.99
		3/2/2011	--	18.41	--	5,553.66
		6/15/2011	--	13.89	--	5,558.18
		12/15/2011	--	16.75	--	5,555.32
		6/14/2012	--	14.23	--	5,557.84
		12/4/2012	--	16.11	--	5,555.96
		6/18/2013	--	14.05	--	5,558.02
		12/17/2013	--	16.74	--	5,555.33
		6/18/2014	--	13.91	--	5,558.16
		12/10/2014	--	16.52	--	5,555.55



TABLE 1
GROUNDWATER ELEVATION SUMMARY

Bruington Gas Com #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-5	5,572.07	6/8/2015	--	13.61	--	5,558.46
		12/14/2015	--	16.78	--	5,555.29
		2/19/2016	--	19.93	--	5,552.14
		6/13/2016	--	14.72	--	5,557.35
		12/13/2016	--	16.61	--	5,555.46
		6/28/2017	--	14.59	--	5,557.48
		12/5/2017	--	16.65	--	5,555.42
		6/27/2018	--	14.21	--	5,557.86
		12/11/2018	--	17.55	--	5,554.52
		6/18/2019	--	15.70	--	5,556.37
		12/9/2019	--	18.22	--	5,553.85
		6/11/2020	--	15.12	--	5,556.95
		12/16/2020	--	17.95	--	5,554.12
		6/21/2021	--	14.65	--	5,557.42
		12/16/2021	--	17.38	--	5,554.69
		7/6/2022	--	15.33	--	5,556.74
		12/30/2022	--	19.23	--	5,552.84
MW-6	5,574.33	5/17/2001	--	19.47	--	5,554.86
		9/24/2001	--	14.46	--	5,559.87
		6/27/2002	--	16.68	--	5,557.65
		6/25/2003	--	18.94	--	5,555.39
		6/18/2004	--	18.71	--	5,555.62
		6/27/2005	--	17.09	--	5,557.24
		4/25/2006	--	19.28	--	5,555.05
		11/10/2006	--	--	--	--
		11/27/2006	--	17.08	--	5,557.25
		2/23/2007	--	18.92	--	5,555.41
		3/28/2007	--	20.36	--	5,553.97
		4/11/2007	--	19.69	--	5,554.64
		6/13/2007	--	16.87	--	5,557.46
		8/21/2007	--	16.04	--	5,558.29
		9/25/2007	--	15.98	--	5,558.35
		10/30/2007	--	15.91	--	5,558.42
		11/27/2007	--	17.79	--	5,556.54
		12/20/2007	--	18.83	--	5,555.50
		2/26/2008	--	--	--	--
		3/12/2008	--	19.42	--	5,554.91
		4/7/2008	--	--	--	--
		6/2/2008	--	16.61	--	5,557.72
		8/12/2008	--	15.61	--	5,558.72
		9/22/2008	--	16.15	--	5,558.18
		10/22/2008	--	15.49	--	5,558.84
		12/5/2008	--	17.70	--	5,556.63



TABLE 1
GROUNDWATER ELEVATION SUMMARY

Bruington Gas Com #1
Hilcorp Energy Company
San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-6	5,574.33	2/6/2009	--	19.33	--	5,555.00
		3/3/2009	--	20.67	--	5,553.66
		6/24/2009	--	16.18	--	5,558.15
		9/15/2009	--	15.25	--	5,559.08
		12/7/2009	--	17.52	--	5,556.81
		3/3/2010	--	20.69	--	5,553.64
		6/21/2010	--	16.44	--	5,557.89
		9/9/2010	--	15.60	--	5,558.73
		1/13/2011	--	19.55	--	5,554.78
		3/2/2011	--	20.08	--	5,554.25
		6/15/2011	--	16.55	--	5,557.78
		12/15/2011	--	18.32	--	5,556.01
		6/14/2012	--	17.05	--	5,557.28
		12/4/2012	--	17.92	--	5,556.41
		6/18/2013	--	16.91	--	5,557.42
		12/17/2013	--	18.48	--	5,555.85
		6/18/2014	--	16.68	--	5,557.65
		12/10/2014	--	18.28	--	5,556.05
		6/8/2015	--	16.53	--	5,557.80
		12/14/2015	--	18.30	--	5,556.03
		2/19/2016	--	21.38	--	5,552.95
		6/13/2016	--	18.56	--	5,555.77
		12/13/2016	--	18.38	--	5,555.95
		6/28/2017	--	17.23	--	5,557.10
		12/5/2017	--	18.45	--	5,555.88
		6/27/2018	--	17.90	--	5,556.43
		12/11/2018	--	19.24	--	5,555.09
		6/18/2019	--	18.49	--	5,555.84
		12/9/2019	--	20.12	--	5,554.21
		6/11/2020	--	18.18	--	5,556.15
		12/16/2020	--	19.80	--	5,554.53
		6/21/2021	--	17.65	--	5,556.68
		12/16/2021	--	19.21	--	5,555.12
		7/6/2022	--	17.98	--	5,556.35
		12/30/2022	--	21.88	--	5,552.45
MW-7	5,573.88	8/25/2003	--	17.93	--	5,555.95
		6/18/2004	--	18.87	--	5,555.01
		6/27/2005	--	17.40	--	5,556.48
		4/25/2006	--	19.14	--	5,554.74
		11/10/2006	--	--	--	--
		11/27/2006	--	16.94	--	5,556.94
		2/23/2007	--	17.71	--	5,556.17



TABLE 1
GROUNDWATER ELEVATION SUMMARY
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-7	5,573.88	3/28/2007	--	18.62	--	5,555.26
		4/11/2007	--	18.63	--	5,555.25
		6/13/2007	--	16.75	--	5,557.13
		8/21/2007	--	15.86	--	5,558.02
		9/25/2007	--	15.65	--	5,558.23
		10/30/2007	--	15.46	--	5,558.42
		11/27/2007	--	16.46	--	5,557.42
		12/20/2007	--	17.14	--	5,556.74
		2/26/2008	--	--	--	--
		3/12/2008	--	17.23	--	5,556.65
		4/7/2008	--	--	--	--
		6/2/2008	--	16.22	--	5,557.66
		8/12/2008	--	15.30	--	5,558.58
		9/22/2008	--	15.47	--	5,558.41
		10/22/2008	--	15.22	--	5,558.66
		12/5/2008	--	16.23	--	5,557.65
		2/6/2009	--	17.85	--	5,556.03
		3/3/2009	--	18.60	--	5,555.28
		6/24/2009	--	16.38	--	5,557.50
		9/15/2009	--	15.21	--	5,558.67
		12/7/2009	--	16.05	--	5,557.83
		3/3/2010	--	18.64	--	5,555.24
		6/21/2010	--	16.58	--	5,557.30
		9/9/2010	--	15.49	--	5,558.39
		1/13/2011	--	17.78	--	5,556.10
		3/2/2011	--	18.54	--	5,555.34
		6/15/2011	--	16.72	--	5,557.16
		12/15/2011	--	16.75	--	5,557.13
		6/14/2012	--	17.23	--	5,556.65
		12/4/2012	--	16.53	--	5,557.35
		6/18/2013	--	17.07	--	5,556.81
		12/17/2013	--	17.02	--	5,556.86
		6/18/2014	--	16.75	--	5,557.13
		12/10/2014	--	16.92	--	5,556.96
		6/8/2015	--	16.74	--	5,557.14
		12/14/2015	--	16.72	--	5,557.16
		2/19/2016	--	19.37	--	5,554.51
		6/13/2016	--	17.82	--	5,556.06
		12/13/2016	--	17.56	--	5,556.32
		6/28/2017	--	17.15	--	5,556.73
		12/5/2017	--	17.24	--	5,556.64
		6/27/2018	--	17.32	--	5,556.56



TABLE 1
GROUNDWATER ELEVATION SUMMARY
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-7	5,573.88	12/11/2018	--	18.13	--	5,555.75
		6/18/2019	--	18.68	--	5,555.20
		12/9/2019	--	18.70	--	5,555.18
		6/11/2020	18.56	19.70	1.14	5,555.09
		12/16/2020	--	18.37	--	5,555.51
		6/21/2021	--	18.15	--	5,555.73
		12/16/2021	--	--	--	--
		7/6/2022	--	21.53	--	5,552.35
		12/30/2022	--	--	--	--
MW-8	5,576.04	6/13/2007	--	19.19	--	5,556.85
		8/21/2007	--	18.30	--	5,557.74
		9/25/2007	--	18.00	--	5,558.04
		10/30/2007	--	15.46	--	5,560.58
		11/27/2007	--	18.30	--	5,557.74
		12/20/2007	--	18.81	--	5,557.23
		2/26/2008	--	--	--	--
		3/12/2008	--	18.92	--	5,557.12
		4/7/2008	--	--	--	--
		6/2/2008	--	18.23	--	5,557.81
		8/12/2008	--	17.52	--	5,558.52
		9/22/2008	--	17.56	--	5,558.48
		10/22/2008	--	17.47	--	5,558.57
		12/5/2008	--	17.99	--	5,558.05
		2/6/2009	--	19.50	--	5,556.54
		3/3/2009	--	20.03	--	5,556.01
		6/24/2009	--	19.00	--	5,557.04
		9/15/2009	--	17.74	--	5,558.30
		12/7/2009	--	17.81	--	5,558.23
		3/3/2010	--	20.11	--	5,555.93
		6/21/2010	--	19.31	--	5,556.73
		9/9/2010	--	18.02	--	5,558.02
		1/13/2011	--	19.35	--	5,556.69
		3/2/2011	--	21.09	--	5,554.95
		6/15/2011	--	19.38	--	5,556.66
		12/15/2011	--	18.53	--	5,557.51
		6/14/2012	--	19.93	--	5,556.11
		12/4/2012	--	18.34	--	5,557.70
		6/18/2013	--	19.75	--	5,556.29
		12/17/2013	--	18.72	--	5,557.32
		6/18/2014	--	19.39	--	5,556.65



TABLE 1
GROUNDWATER ELEVATION SUMMARY
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-8	5,576.04	12/10/2014	--	17.01	--	5,559.03
		6/8/2015	--	19.51	--	5,556.53
		12/14/2015	--	18.37	--	5,557.67
		2/19/2016	--	20.62	--	5,555.42
		6/13/2016	--	20.41	--	5,555.63
		12/13/2016	--	18.89	--	5,557.15
		6/28/2017	--	19.78	--	5,556.26
		12/5/2017	--	19.10	--	5,556.94
		6/27/2018	--	20.22	--	5,555.82
		12/11/2018	--	18.89	--	5,557.15
		6/18/2019	--	21.75	--	5,554.29
		12/9/2019	--	20.43	--	5,555.61
		6/11/2020	22.35	22.71	0.36	5,553.62
		12/16/2020	--	20.08	--	5,555.96
		6/21/2021	--	21.22	--	5,554.82
		12/16/2021	Trace	19.65	Trace	5,556.39
		7/6/2022	--	--	--	--
		12/30/2022	--	21.27	--	5,554.77
MW-9	5,576.86	1/13/2011	Dry			
		3/2/2011	--	21.06	--	5,555.80
		6/15/2011	--	18.78	--	5,558.08
		12/15/2011	--	16.97	--	5,559.89
		6/14/2012	--	18.73	--	5,558.13
		12/4/2012	--	17.09	--	5,559.77
		6/18/2013	--	19.05	--	5,557.81
		12/17/2013	--	15.44	--	5,561.42
		6/18/2014	--	18.80	--	5,558.06
		12/10/2014	--	17.09	--	5,559.77
		6/8/2015	--	18.11	--	5,558.75
		12/14/2015	--	16.35	--	5,560.51
		2/19/2016	--	17.81	--	5,559.05
		6/13/2016	--	18.00	--	5,558.86
		12/13/2016	--	16.40	--	5,560.46
		6/28/2017	--	16.75	--	5,560.11



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 San Juan County, New Mexico

Well Number	Top of Casing Elevation (feet AMSL)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-9	5,576.86	12/5/2017	--	15.75	--	5,561.11
		6/27/2018	--	17.39	--	5,559.47
		12/11/2018	--	14.57	--	5,562.29
		6/18/2019	--	16.00	--	5,560.86
		12/9/2019	--	14.62	--	5,562.24
		6/11/2020	--	16.55	--	5,560.31
		12/16/2020	--	13.71	--	5,563.15
		6/21/2021	--	15.06	--	5,561.80
		12/16/2021	--	12.82	--	5,564.04
		7/6/2022	--	14.66	--	5,562.20
		12/30/2022	--	13.52	--	5,563.34

Notes:

*: Top of Casing Modified, New Elevation

AMSL: above mean sea level

BTOC: below top of casing

--: indicates no GWEL or PSH measured

Trace: Trace amounts of product detected

When product is present, the groundwater elevation is corrected using an estimated density correction factor of 0.7996



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-1	7/6/1996	ND	ND	ND	ND
MW-1R	5/5/1999	16.5	26.0	8.1	78.2
MW-1R	6/29/2000	17.0	ND	130.0	455.5
MW-1R	5/17/2001	29.0	19.0	33.0	127.0
MW-1R	9/24/2001	5.8	0.5	15.0	36.0
MW-1R	7/27/2002	ND	ND	17.0	52.1
MW-1R	6/25/2003	3.1	ND	ND	ND
MW-1R	8/25/2003	ND	ND	2.2	0.9
MW-1R	4/25/2006	1.0	1.3	1.8	5.9
MW-1R	11/27/2006	<1.0	<1.0	<1.0	<3.0
MW-1R	3/28/2007	<1.0	<1.0	<1.0	<2.0
MW-1R	6/13/2007	<1.0	<1.0	<1.0	<2.0
MW-1R	9/25/2007	<1.0	1.2	<1.0	<2.0
MW-1R	3/12/2008	<1.0	<1.0	<1.0	<2.0
MW-1R	6/2/2008	<1.0	<1.0	<1.0	<2.0
MW-1R	9/22/2008	<1.0	<1.0	<1.0	<2.0
MW-1R	12/5/2008	<1.0	<1.0	<1.0	<2.0
MW-1R	3/3/2009	<1.0	<1.0	<1.0	<2.0
MW-1R	6/24/2009	<1.0	<1.0	<1.0	<3.0
MW-1R	9/15/2009	<1.0	<1.0	<1.0	<2.0
MW-1R	12/7/2009	<1.0	<1.0	<1.0	<2.0
MW-1R	3/3/2010	<1.0	<1.0	<1.0	<2.0
MW-1R	6/21/2010	<1.0	<1.0	<1.0	<2.0
MW-1R	9/9/2010	<0.5	< 5.0	<0.5	<1.5
MW-1R	1/13/2011	<0.5	< 5.0	<0.5	<1.5
MW-1R	6/15/2011	<0.5	< 5.0	1.9	<1.5
MW-1R	12/15/2011	<0.5	< 5.0	<0.5	<1.5
MW-1R	12/4/2012	<0.5	< 5.0	<0.5	<1.5
MW-1R	12/17/2013	<0.5	<5.0	<0.5	<1.5
MW-1R	12/10/2014	<0.5	<5.0	<0.5	<1.5
MW-1R	12/14/2015	<0.5	<5.0	<0.5	<1.5
MW-1R	12/13/2016	<0.5	<1.0	<0.5	<1.5
MW-1R	12/5/2017	<0.500	<1.00	<0.500	<1.50
MW-1R	12/11/2018	<1.0	<1.0	<1.0	<2.0
MW-1R	6/18/2019	<1.0	<1.0	<1.0	<1.5
MW-1R	12/16/2020	<1.0	<1.0	<1.0	<2.0
MW-1R	12/16/2021	<1.0	<1.0	<1.0	<2.0
MW-1R	12/30/2022	<1.0	<1.0	<1.0	<2.0



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-2	6/7/1996	347	29	156	1,580
MW-2	6/27/1997	429	68	46	402
MW-2R	6/12/1998	13,440	13,330	1,030	6,040
MW-2R	5/5/1999	1,020	554	175	679
MW-2R	6/29/2000	7,600	2,600	630	4,210
MW-2R	5/17/2001	1,700	320	390	1,620
MW-2R	9/24/2001	15,000	1,200	880	5,900
MW-2R	6/27/2002	13,000	1,100	680	4,120
MW-2R	6/25/2003	3,700	1,000	380	2,500
MW-2R	6/18/2004	5,500	1,400	710	3,500
MW-2R	6/27/2005	16,000	1,900	900	5,400
MW-2R	4/25/2006	5,000	1,100	700	3,800
MW-2R	11/27/2006	12,000	1,600	690	3,900
MW-2R	3/28/2007	4,300	1,000	810	6,000
MW-2R	6/13/2007	13,000	1,100	720	4,000
MW-2R	9/25/2007	18,000	1,900	990	5,500
MW-2R	3/12/2008	2,800	890	750	5,300
MW-2R	6/2/2008	5,900	430	510	2,200
MW-2R	9/22/2008	18,000	920	950	4,900
MW-2R	12/5/2008	20,000	1,700	1,100	5,300
MW-2R	3/3/2009	5,500	1,400	470	2,900
MW-2R	6/24/2009	18,000	2,200	970	6,500
MW-2R	9/15/2009	18,000	760	850	4,400
MW-2R	12/7/2009	11,000	1,000	720	3,600
MW-2R	3/3/2010	2,100	460	410	2,400
MW-2R	6/21/2010	9,500	960	630	3,100
MW-2R	9/9/2010	19,000	530	940	3,200
MW-2R	1/13/2011	16,000	2,500	940	4,900
MW-2R	6/15/2011	20,000	<2,500	870	4,200
MW-2R	12/15/2011	11,000	<2,500	710	3,000
MW-2R	12/4/2012	11,000	1,400	590	2,700
MW-2R	12/17/2013	13,000	2,300	620	4,400
MW-2R	12/10/2014	18,000	1,800	860	3,300
MW-2R	12/14/2015	13,400	2,570	908	6,270
MW-2R	12/13/2016	14,000	2,190	926	5,600
MW-2R	12/5/2017	14,200	1,380	837	4,200
MW-2R	12/11/2018	15,000	1,800	740	4,200
MW-2R	6/18/2019	14,000	1,800	700	4,300
MW-2R	12/16/2020	12,000	5,300	1,100	11,000
MW-2R	12/16/2021	9,100	2,500	920	7,300
MW-2R	12/30/2022	7,300	1,700	580	5,100



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-3	6/7/1996	ND	1.8	ND	ND
MW-3	5/5/1999	73.2	38.3	31.2	200.1
MW-3	6/29/2000	87.0	ND	3.4	8.3
MW-3	5/17/2001	ND	0.6	0.7	ND
MW-3	9/24/2001	ND	ND	ND	ND
MW-3R	8/25/2003	ND	ND	1.3	ND
MW-3R	11/19/2003	ND	ND	1.4	ND
MW-3R	4/25/2006	<1.0	<1.0	<1.0	<3.0
MW-3R	11/27/2006	<1.0	<1.0	<1.0	<2.0
MW-3R	3/28/2007	<1.0	<1.0	<1.0	<2.0
MW-3R	3/12/2008	<1.0	<1.0	<1.0	<2.0
MW-3R	6/2/2008	<1.0	<1.0	<1.0	<2.0
MW-3R	9/22/2008	<1.0	<1.0	<1.0	<2.0
MW-3R	12/5/2008	<1.0	<1.0	<1.0	<2.0
MW-3R	3/3/2009	<1.0	<1.0	<1.0	<2.0
MW-3R	6/24/2009	7.2	<1.0	<1.0	<3.0
MW-3R	9/15/2009	<1.0	<1.0	<1.0	<2.0
MW-3R	12/7/2009	<1.0	<1.0	<1.0	<2.0
MW-3R	3/3/2010	<1.0	<1.0	<1.0	<2.0
MW-3R	6/21/2010	75	<1.0	<1.0	<2.0
MW-3R	9/9/2010	94	50	4.4	30
MW-3R	1/13/2011	<0.5	<5.0	<0.5	<1.5
MW-3R	6/15/2011	<0.5	<5.0	<0.5	<1.5
MW-3R	12/15/2011	<0.5	<5.0	<0.5	<1.5
MW-3R	12/4/2012	<0.5	<5.0	<0.5	<1.5
MW-3R	12/17/2013	<0.5	<5.0	<0.5	<1.5
MW-3R	12/10/2014	<0.5	<5.0	<0.5	<1.5
MW-3R	12/14/2015	<0.5	<5.0	<0.5	<1.5
MW-3R	12/13/2016	<0.5	<1.0	<0.5	<1.5
MW-3R	12/5/2017	<0.500	<1.00	<0.500	<1.50
MW-3R	12/11/2018	<1.0	<1.0	<1.0	<2.0
MW-3R	6/18/2019	<1.0	<1.0	<1.0	<1.5
MW-3R	12/16/2020	NS	NS	NS	NS
MW-3R	12/16/2021	NS	NS	NS	NS
MW-3R	12/30/2022	NS	NS	NS	NS



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-4	5/17/2001	ND	ND	ND	ND
MW-4	4/25/2006	ND	ND	ND	ND
MW-4	11/27/2006	<1.0	<1.0	<1.0	<3.0
MW-4	3/28/2007	1.8	<1.0	<1.0	<2.0
MW-4	6/13/2007	<1.0	<1.0	<1.0	<2.0
MW-4	9/25/2007	<1.0	<1.0	<1.0	<2.0
MW-4	3/12/2008	<1.0	<1.0	<1.0	<2.0
MW-4	6/2/2008	<1.0	<1.0	<1.0	<2.0
MW-4	9/22/2008	<1.0	<1.0	<1.0	<2.0
MW-4	12/5/2008	<1.0	<1.0	<1.0	<2.0
MW-4	3/3/2009	<1.0	<1.0	<1.0	<2.0
MW-4	6/24/2009	<1.0	<1.0	<1.0	<2.0
MW-4	9/15/2009	<1.0	<1.0	<1.0	<2.0
MW-4	12/7/2009	<1.0	<1.0	<1.0	<2.0
MW-4	3/3/2010	<1.0	<1.0	<1.0	<2.0
MW-4	6/21/2010	<1.0	<1.0	<1.0	<2.0
MW-4	9/9/2010	<0.50	< 5.0	<0.50	<1.5
MW-4	1/13/2011	<0.5	<5.0	<0.5	<1.5
MW-4	6/15/2011	<0.5	<5.0	<0.5	<1.5
MW-4	12/15/2011	<0.5	<5.0	<0.5	<1.5
MW-4	12/4/2012	<0.5	<5.0	<0.5	<1.5
MW-4	12/17/2013	<0.5	<5.0	<0.5	<1.5
MW-4	12/10/2014	<0.5	<5.0	<0.5	<1.5
MW-4	12/14/2015	<0.5	<5.0	<0.5	<1.5
MW-4	12/13/2016	<0.5	<1.0	<0.5	<1.5
MW-4	12/5/2017	<0.500	<1.00	<0.500	<1.50
MW-4	12/11/2018	<1.0	<1.0	<1.0	<2.0
MW-4	6/18/2019	<1.0	<1.0	<1.0	<1.5
MW-4	12/16/2020	<1.0	<1.0	<1.0	<2.0
MW-4	12/16/2021	<1.0	<1.0	<1.0	<2.0
MW-4	12/30/2022	NS	NS	NS	NS



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-5	5/17/2001	25,000	620	870	6,610
MW-5	9/24/2001	26,000	110	470	6,900
MW-5	6/27/2002	26,000	280	900	6,670
MW-5	6/25/2003	26,000	ND	ND	4,400
MW-5	6/18/2004	26,000	ND	1,100	3,400
MW-5	6/27/2005	29,000	ND	920	3,400
MW-5	4/25/2006	28,000	ND	1,600	2,700
MW-5	11/27/2006	22,000	<250	630	1,700
MW-5	3/28/2007	30,000	590	1,700	4,600
MW-5	6/13/2007	32,000	91	940	2,000
MW-5	9/25/2007	25,000	170	620	1,700
MW-5	3/12/2008	28,000	110	1,200	2,300
MW-5	6/2/2008	25,000	<100	1,100	1,300
MW-5	9/22/2008	20,000	<200	760	1,100
MW-5	12/5/2008	24,000	<100	580	1,400
MW-5	3/3/2009	9,800	<100	450	920
MW-5	6/24/2009	25,000	46	40	1,400
MW-5	9/15/2009	27,000	<400	770	2,000
MW-5	12/7/2009	23,000	<400	690	1,400
MW-5	3/3/2010	16,000	<100	350	710
MW-5	6/21/2010	18,000	<100	430	890
MW-5	9/9/2010	25,000	130	510	1,600
MW-5	1/13/2011	17,000	<500	360	900
MW-5	6/15/2011	27,000	<500	<50	1,400
MW-5	12/15/2011	15,000	<500	310	810
MW-5	12/4/2012	32,000	<120	250	1,500
MW-5	12/17/2013	21,000	110	290	1,100
MW-5	12/10/2014	24,000	<250	610	1,400
MW-5	12/14/2015	26,700	161	538	1,050
MW-5	12/13/2016	19,200	112	60.1	1,340
MW-5	12/5/2017	13,800	128	92.4	571
MW-5	12/11/2018	21,000	550	630	2,000
MW-5	6/18/2019	27,000	320	510	1,300
MW-5	12/16/2020	14,000	350	670	2,500
MW-5	12/16/2021	18,000	350	850	2,500
MW-5	12/30/2022	21,000	450	730	2,100



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-6	5/17/2001	28,000	15,000	1,000	9,400
MW-6	9/24/2001	22,000	6,000	1,100	6,900
MW-6	6/27/2002	28,000	16,000	990	9,800
MW-6	6/25/2003	22,000	16,000	ND	6,300
MW-6	6/18/2004	23,000	19,000	1,000	8,800
MW-6	6/27/2005	28,000	20,000	1,200	9,600
MW-6	4/25/2006	26,000	25,000	1,700	8,900
MW-6	11/27/2006	22,000	23,000	990	9,700
MW-6	3/28/2007	25,000	27,000	1,900	19,000
MW-6	6/13/2007	21,000	19,000	780	7,900
MW-6	9/25/2007	27,000	21,000	1,200	11,000
MW-6	3/12/2008	21,000	21,000	1,200	11,000
MW-6	6/2/2008	19,000	16,000	870	9,000
MW-6	9/22/2008	15,000	14,000	770	8,500
MW-6	12/5/2008	28,000	27,000	1,100	12,000
MW-6	3/3/2009	19,000	20,000	880	9,300
MW-6	6/24/2009	23,000	18,000	900	9,200
MW-6	9/15/2009	18,000	14,000	740	7,700
MW-6	12/7/2009	19,000	19,000	1,000	10,000
MW-6	3/3/2010	15,000	16,000	860	9,300
MW-6	6/21/2010	18,000	15,000	680	7,000
MW-6	9/9/2010	21,000	16,000	880	8,300
MW-6	1/13/2011	19,000	18,000	1,000	10,000
MW-6	6/15/2011	21,000	17,000	730	7,500
MW-6	12/15/2011	25,000	22,000	960	9,700
MW-6	12/4/2012	24,000	20,000	950	9,400
MW-6	12/17/2013	21,000	20,000	920	10,000
MW-6	12/10/2014	18,000	19,000	1,100	12,000
MW-6	12/14/2015	20,000	18,200	969	9,650
MW-6	12/13/2016	21,300	21,000	1,110	11,700
MW-6	12/5/2017	15,900	15,900	898	9,370
MW-6	12/11/2018	16,000	14,000	340	3,800
MW-6	6/18/2019	14,000	13,000	430	4,700
MW-6	12/16/2020	21,000	18,000	1,300	13,000
MW-6	12/16/2021	19,000	18,000	2,100	23,000
MW-6	12/30/2022	19,000	21,000	980	11,000



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-7	8/25/2003	18,000	11,000	930	8,200
MW-7	6/18/2004	11,000	7,800	670	5,000
MW-7	6/27/2005	14,000	8,700	880	5,000
MW-7	4/25/2006	19,000	6,600	1,200	5,100
MW-7	11/27/2006	6,100	4,400	420	2,500
MW-7	3/28/2007	11,000	9,500	100	7,500
MW-7	6/13/2007	3,800	2,000	320	1,700
MW-7	9/25/2007	2,900	2,400	210	1,400
MW-7	3/12/2008	14,000	9,200	830	4,800
MW-7	6/2/2008	8,800	5,300	560	3,100
MW-7	9/22/2008	7,100	4,600	450	2,800
MW-7	12/5/2008	11,000	9,300	680	5,200
MW-7	3/3/2009	11,000	7,800	660	4,500
MW-7	6/24/2009	21,000	14,000	640	6,400
MW-7	9/15/2009	15,000	4,900	640	3,600
MW-7	12/7/2009	9,600	7,700	530	4,200
MW-7	3/3/2010	10,000	7,000	560	4,000
MW-7	6/21/2010	4,100	2,900	280	1,500
MW-7	9/9/2010	3,000	2,300	280	1,400
MW-7	1/13/2011	8,500	5,600	500	2,500
MW-7	6/15/2011	16,000	8,500	760	4,700
MW-7	12/15/2011	8,900	4,300	510	2,700
MW-7	12/4/2012	16,000	8,900	810	4,600
MW-7	12/17/2013	6,200	3,400	390	1,900
MW-7	12/10/2014	7,200	4,800	500	2,600
MW-7	12/14/2015	7,650	4,710	382	1,930
MW-7	12/13/2016	7,520	3,700	399	1,240
MW-7	12/5/2017	5,550	1,840	346	1,360
MW-7	12/11/2018	7,500	1,900	290	1,200
MW-7	6/18/2019	4,200	890	160	460
MW-7	12/16/2020	11,000	11,000	760	5,500
MW-7	12/16/2021	NS	NS	NS	NS
MW-7	12/30/2022	NS	NS	NS	NS



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Bruington Gas Com #1
 Hilcorp Energy Company
 San Juan County, New Mexico

Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-8	6/13/2007	24,000	24,000	350	10,000
MW-8	9/25/2007	18,000	4,000	960	9,100
MW-8	3/12/2008	730	64	ND	2,000
MW-8	6/2/2008	12,000	7,100	490	5,300
MW-8	9/22/2008	15,000	13,000	520	7,200
MW-8	12/5/2008	18,000	15,000	810	7,700
MW-8	3/3/2009	16,000	12,000	660	5,700
MW-8	6/24/2009	21,000	13,000	690	5,700
MW-8	9/15/2009	15,000	7,800	590	4,900
MW-8	12/7/2009	10,000	1,300	570	2,500
MW-8	3/3/2010	14,000	7,800	610	3,900
MW-8	6/21/2010	17,000	15,000	630	6,600
MW-8	9/9/2010	17,000	7,800	760	4,600
MW-8	1/13/2011	18,000	10,000	730	4,700
MW-8	6/15/2011	12,000	5,300	460	2,300
MW-8	12/15/2011	16,000	10,000	810	6,000
MW-8	12/4/2012	13,000	6,300	630	3,300
MW-8	12/17/2013	18,000	18,000	720	7,400
MW-8	12/10/2014	18,000	15,000	870	7,100
MW-8	12/14/2015	18,300	18,900	727	7,600
MW-8	12/13/2016	15,300	12,700	448	3,970
MW-8	12/5/2017	12,100	11,600	767	6,160
MW-8	12/11/2018	12,000	14,000	510	6,300
MW-8	6/18/2019	420	780	33	280
MW-8	12/16/2020	2,300	5,100	240	3,500
MW-8	12/16/2021	NS	NS	NS	NS
MW-8	12/30/2022	6,900	12,000	680	9,900



TABLE 2 GROUNDWATER ANALYTICAL RESULTS Bruington Gas Com #1 Hilcorp Energy Company San Juan County, New Mexico					
Groundwater Sample Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Groundwater Standard		5	1,000	700	620
MW-9	3/10/2011	<0.5	<5.0	<0.5	<1.5
MW-9	6/15/2011	<0.5	<5.0	<0.5	<1.5
MW-9	12/16/2013	5.8	<5.0	<0.5	<1.5
MW-9	12/10/2014	<0.5	<5.0	<0.5	<1.5
MW-9	12/14/2015	285	<5.0	<0.5	<1.5
MW-9	2/19/2016	3.48	<5.0	<0.5	<1.5
MW-9	12/13/2016	72.7	<1.0	<0.5	<1.5
MW-9	6/28/2017	2.80	<1.00	<0.500	<1.50
MW-9	12/5/2017	75.0	1.48	<0.500	<1.50
MW-9	6/27/2018	150	<1.0	<1.0	<1.5
MW-9	12/11/2018	110	<1.0	<1.0	<2.0
MW-9	6/18/2019	1.1	<1.0	<1.0	<1.5
MW-9	12/16/2020	<1.0	<1.0	<1.0	<2.0
MW-9	12/16/2021	<5.0	<5.0	<5.0	<10
MW-9	12/30/2022	2.9	<2.0	<2.0	<4.0

Notes:

µg/L: micrograms per liter

ND: not detected above laboratory reporting limit

NMWQCC: New Mexico Water Quality Control Commission

NS: not sampled

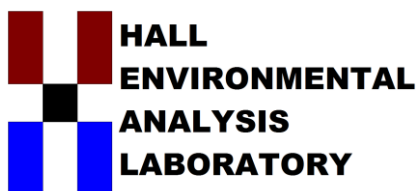
<: indicates result is less than the stated laboratory reporting limit

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



APPENDIX A

Laboratory Analytical Reports



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

January 24, 2023

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

RE: Bruington GC 1

OrderNo.: 2301003

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/31/2022 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2301003
Date Reported: 1/24/2023

CLIENT: HILCORP ENERGY Client Sample ID: MW-2
Project: Bruington GC 1 Collection Date: 12/30/2022 1:25:00 PM
Lab ID: 2301003-002 Matrix: AQUEOUS Received Date: 12/31/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	7300	200		µg/L	200	1/5/2023 12:06:56 AM
Toluene	1700	200		µg/L	200	1/5/2023 12:06:56 AM
Ethylbenzene	580	200		µg/L	200	1/5/2023 12:06:56 AM
Xylenes, Total	5100	400		µg/L	200	1/5/2023 12:06:56 AM
Surr: 4-Bromofluorobenzene	82.9	70-130		%Rec	200	1/5/2023 12:06:56 AM

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2301003
Date Reported: 1/24/2023

CLIENT: HILCORP ENERGY Client Sample ID: MW-5
Project: Bruington GC 1 Collection Date: 12/30/2022 1:00:00 PM
Lab ID: 2301003-003 Matrix: AQUEOUS Received Date: 12/31/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	21000	500	P	µg/L	500	1/5/2023 12:30:05 AM
Toluene	450	50	P	µg/L	50	1/5/2023 12:53:16 AM
Ethylbenzene	730	50	P	µg/L	50	1/5/2023 12:53:16 AM
Xylenes, Total	2100	100	P	µg/L	50	1/5/2023 12:53:16 AM
Surr: 4-Bromofluorobenzene	89.2	70-130	P	%Rec	50	1/5/2023 12:53:16 AM

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2301003
Date Reported: 1/24/2023

CLIENT: HILCORP ENERGY Client Sample ID: MW-6
Project: Bruington GC 1 Collection Date: 12/30/2022 2:30:00 PM
Lab ID: 2301003-004 Matrix: AQUEOUS Received Date: 12/31/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	19000	2000		µg/L	2000	1/5/2023 4:30:17 PM
Toluene	21000	2000		µg/L	2000	1/5/2023 4:30:17 PM
Ethylbenzene	980	200		µg/L	200	1/5/2023 1:39:36 AM
Xylenes, Total	11000	400		µg/L	200	1/5/2023 1:39:36 AM
Surr: 4-Bromofluorobenzene	83.4	70-130		%Rec	200	1/5/2023 1:39:36 AM

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2301003

Date Reported: 1/24/2023

CLIENT: HILCORP ENERGY

Client Sample ID: MW-8

Project: Bruington GC 1

Collection Date: 12/30/2022 2:55:00 PM

Lab ID: 2301003-005

Matrix: AQUEOUS

Received Date: 12/31/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	6900	500		µg/L	500	1/5/2023 4:53:52 PM
Toluene	12000	500		µg/L	500	1/5/2023 4:53:52 PM
Ethylbenzene	680	50		µg/L	50	1/5/2023 2:02:44 AM
Xylenes, Total	9900	100		µg/L	50	1/5/2023 2:02:44 AM
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	50	1/5/2023 2:02:44 AM

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2301003

Date Reported: 1/24/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-9

Project: Bruington GC 1

Collection Date: 12/30/2022 3:30:00 PM

Lab ID: 2301003-006

Matrix: AQUEOUS

Received Date: 12/31/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	2.9	2.0	D	µg/L	2	1/5/2023 2:25:51 AM
Toluene	ND	2.0	D	µg/L	2	1/5/2023 2:25:51 AM
Ethylbenzene	ND	2.0	D	µg/L	2	1/5/2023 2:25:51 AM
Xylenes, Total	ND	4.0	D	µg/L	2	1/5/2023 2:25:51 AM
Surr: 4-Bromofluorobenzene	82.2	70-130	D	%Rec	2	1/5/2023 2:25:51 AM

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2301003

24-Jan-23

Client: HILCORP ENERGY

Project: Bruington GC 1

Sample ID: 100ng btex lcsII	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batch ID: R93719		RunNo: 93719							
Prep Date:	Analysis Date: 1/4/2023		SeqNo: 3382980		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	87.4	70	130			
Toluene	18	1.0	20.00	0	89.6	70	130			
Ethylbenzene	18	1.0	20.00	0	89.4	70	130			
Xylenes, Total	53	2.0	60.00	0	89.1	70	130			
Surr: 4-Bromofluorobenzene	16		20.00		82.4	70	130			

Sample ID: 2301003-001a ms	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: MW-1	Batch ID: R93719		RunNo: 93719							
Prep Date:	Analysis Date: 1/4/2023		SeqNo: 3382984		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0.3160	85.6	70	130			
Toluene	18	1.0	20.00	0.2460	87.8	70	130			
Ethylbenzene	18	1.0	20.00	0	88.6	70	130			
Xylenes, Total	54	2.0	60.00	0.4680	88.8	70	130			
Surr: 4-Bromofluorobenzene	17		20.00		85.4	70	130			

Sample ID: 2301003-001a msd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: MW-1	Batch ID: R93719		RunNo: 93719							
Prep Date:	Analysis Date: 1/4/2023		SeqNo: 3382985		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0.3160	82.5	70	130	3.54	20	
Toluene	17	1.0	20.00	0.2460	85.4	70	130	2.76	20	
Ethylbenzene	17	1.0	20.00	0	87.3	70	130	1.43	20	
Xylenes, Total	53	2.0	60.00	0.4680	87.0	70	130	2.01	20	
Surr: 4-Bromofluorobenzene	17		20.00		84.2	70	130	0	0	

Sample ID: mbII	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBW	Batch ID: R93719		RunNo: 93719							
Prep Date:	Analysis Date: 1/4/2023		SeqNo: 3382994		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	2.0								
Surr: 4-Bromofluorobenzene	17		20.00		82.6	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 Quantitative 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#: 2301003

24-Jan-23

Client: HILCORP ENERGY

Project: Bruington GC 1

Sample ID: 100ng btex lcs	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batch ID: R93756		RunNo: 93756							
Prep Date:	Analysis Date: 1/5/2023		SeqNo: 3384309		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	79.4	70	130			
Toluene	17	1.0	20.00	0	82.7	70	130			
Surr: 4-Bromofluorobenzene	18		20.00		89.2	70	130			

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBW	Batch ID: R93756		RunNo: 93756							
Prep Date:	Analysis Date: 1/5/2023		SeqNo: 3384312		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								
Surr: 4-Bromofluorobenzene	17		20.00		84.5	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 Quantitative 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
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: 2301003

RcptNo: 1

Received By: Andy Freeman 12/31/2022 6:30:00 AM

Completed By: Desiree Dominguez 1/3/2023 8:49:24 AM

Reviewed By: CMC 12/13/22 1/3/23

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: Jm 1/3/23

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:

Temp not recorded, Received fully on ice and in good condition. -DAD 1/3/23

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	Not record	Good	Yes			

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 201816

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID:	372171
	Action Number:	201816
	Action Type:	[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2022 Annual Groundwater Monitoring Report for Bruington Gas Com #1: Content Satisfactory 1. Continue to conduct gauging and annual sampling of all monitoring wells on site. 2. Introduce ORC socks in wells MW-2R, MW-5, MW-6, MW-7, MW-8 3. Complete assessment for ORP and DO for effectiveness. 4. Submit the 2023 annual groundwater report (if not already submitted) and, submit the 2024 Annual Groundwater Reports by April 1, 2025.	5/24/2024