District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NCS 1729355513
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party **Hilcorp Energy Company**	OGRID 372171
Contact Name **Jennifer Deal**	Contact Telephone **505-801-6517**
Contact email **jdeal@hilcorp.com**	Incident # NCS1729355513
Contact mailing address **382 Road 3100 Aztec, NM 87410**	

Location of Release Source

Latitude 36.8324852 Longitude -108.168396
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Bell Federal Gas Com B 1	Site Type Gas Well
Date Release Discovered September 15, 2017 (Historic)	API# *(if applicable)* 30-045-09772

Unit Letter	Section	Township	Range	County
A	11	30N	13W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) 58 (Historic)	Volume Recovered (bbls) 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
XTO (previous operator) discovered a bullet hole in the side of a condensate tank. The vandalized tank resulted in approx.. 58 bbls of condensate draining onto the ground and infiltrating into the subsurface. The release was contained within the bermed area and no liquids were recovered.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? **Release was greater than 25 bbl**

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice given to Cory Smith on September 15, 2017 at 14:25 by James McDaniel (XTO). Initial C-141 was submitted October 1, 2017.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

April 11, 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: First Quarter 2023 – Solar SVE System Update
Bell Federal GC B#1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS1729355513

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *First Quarter 2023 – Solar SVE System Update* report summarizing the solar soil vapor extraction (SVE) system performance at the Bell Federal GC B#1 natural gas production well (Site), located in Section 11, Township 30 North, Range 13 West in San Juan County, New Mexico (Figure 1). The SVE system has operated since January 16, 2018 to remediate subsurface soil impacts originating from a release of approximately 58 barrels (bbls) of natural gas condensate caused by an act of vandalism. This report summarizes Site activities performed in January, February, and March of 2023 to the New Mexico Oil Conservation Division (NMOCD).

SVE SYSTEM SPECIFICATIONS

Currently, a solar SVE system is operating at the Site, which consists of a 1/3-horsepower blower capable of producing 22 cubic feet per minute (cfm) flow at a vacuum of 29 inches of water column (IWC); three solar panels, with a total of 915 watts of maximum power output; and charged by four 12-volt deep cycle batteries that subsequently power the SVE blower. The system operation is controlled by a timer adjusted throughout the year based on available nominal daylight hours (generally nine hours per day during the winter and 14 hours per day during the summer). Four SVE wells (SVE01 through SVE04) are currently present at the Site as depicted on Figure 2.

FIRST QUARTER 2023 ACTIVITIES

During the first quarter of 2023, Ensolum and Hilcorp personnel performed bi-weekly operation and maintenance (O&M) visits to verify the system was operating as designed and to perform any required maintenance. During Site visits, the system timer and the angle of the solar panels were adjusted to account for seasonal variations and maximize system efficiency. Field notes collected during O&M visits are presented in Appendix A.

During the first quarter of 2023, SVE wells SVE03 and SVE04 were operated to induce air flow in the impacted zones at the Site. Between December 7, 2022 and March 9, 2023, approximately 896 total hours of nominal daylight were available for the solar SVE system to operate. Available nominal daylight hours are based on estimates by the National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service (NWS) for the Site location. Between these dates, the actual runtime for the system was 1,193.6 hours, equating to a first quarter 2023 runtime efficiency of 133.2 percent (%). For solar SVE systems, runtime efficiency can be greater than 100% when the solar panels charge the system's batteries during daylight hours and continue to run the SVE blower for a longer duration of time than the nominal daylight hours available at the Site due to excess energy stored in the batteries. Table 1 presents the SVE system runtime compared to nominal available daylight hours per month. Appendix B presents photographs of the runtime meter for calculating the first quarter runtime efficiency.

A first quarter 2023 emissions sample was collected on March 9, 2023 from a sample port located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the emission sample was field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The emission sample was collected directly into two 1-Liter Tedlar® bags and analyzed by Hall Environmental Analysis Laboratory for analysis of total volatile petroleum hydrocarbons (TVPH – also known as total petroleum hydrocarbons – gasoline range organics (TPH-GRO)) by Environmental Protection Agency (EPA) Method 8015D and volatile organic compounds (VOCs) following EPA Method 8260B, as well as fixed gas analysis of oxygen and carbon dioxide following American Society for Testing and Materials (ASTM) Method D-1946. Table 2 presents a summary of analytical data collected during this sampling event and historical sampling events, with the full laboratory analytical report included in Appendix C. Air sample data and measured stack flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 3). Based on these estimates, 43,987 pounds (22 tons) of TVPH have been removed by the system to date.

RECOMMENDATIONS

Bi-weekly O&M visits will continue to be performed by Ensolum and/or Hilcorp personnel to verify the SVE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following quarterly report. Hilcorp will continue operating the SVE system until asymptotic conditions are observed. At that time, an evaluation of residual petroluem hydrocarbons will be assessed and further recommendations for remedial actions, if any, will be provided to NMOCD.

We appreciate the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this report, please contact the undersigned.

Sincerely,
Ensolum, LLC

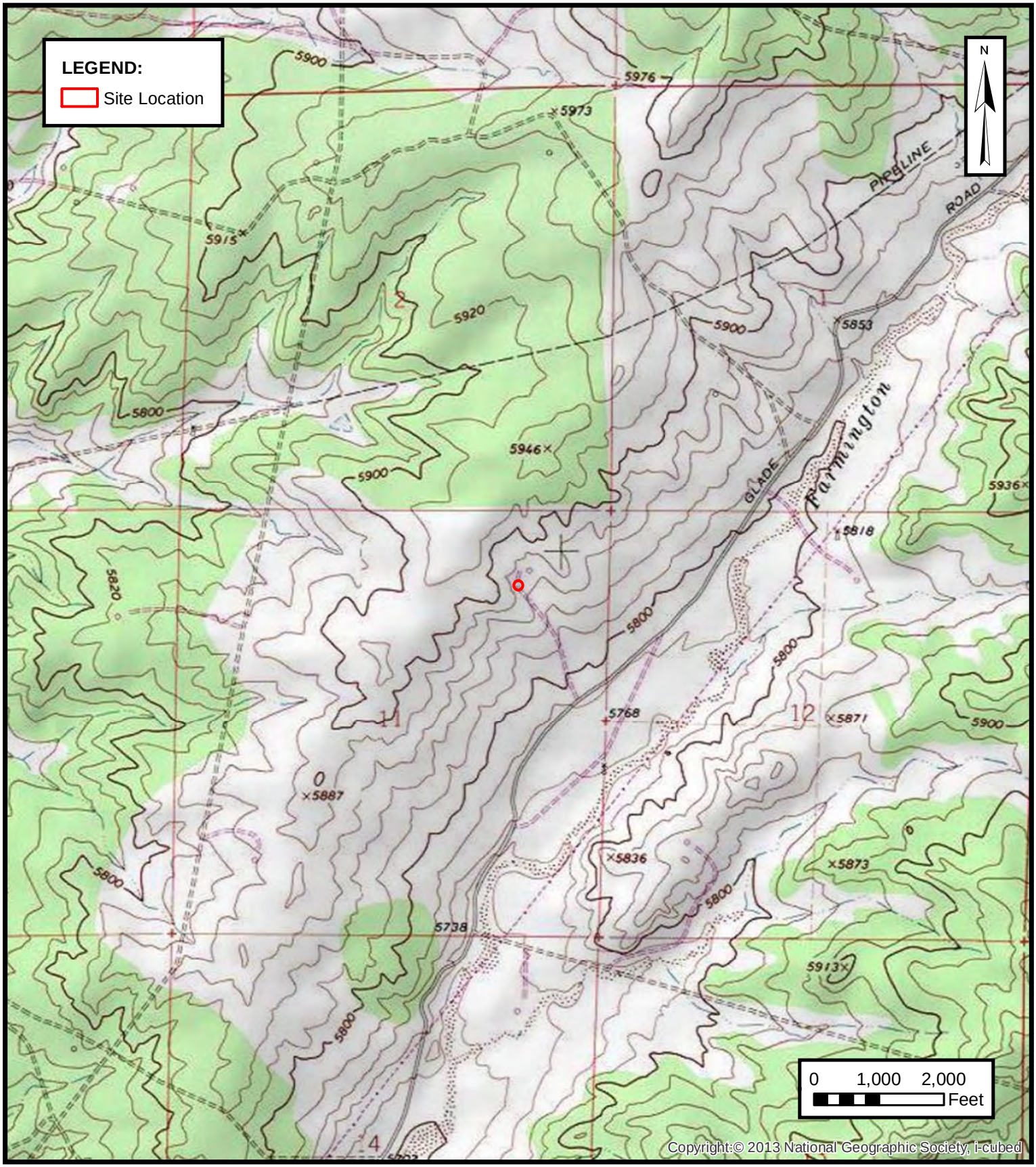
Stuart Hyde, LG
Senior Geologist
(970) 903-1607
shyde@ensolum.com

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

Attachments:

ENSOLUM

FIGURES



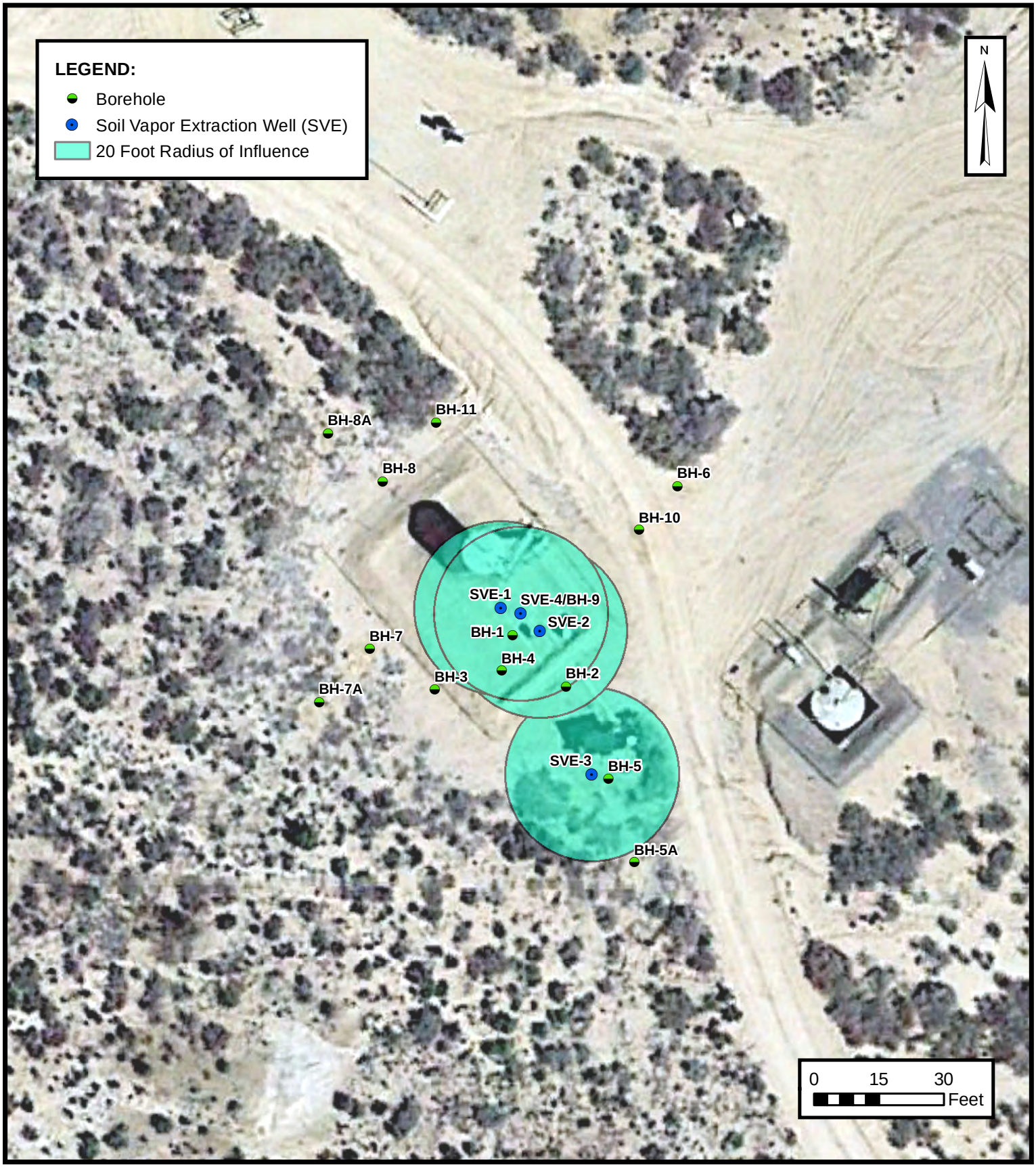
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE LOCATION

HILCORP ENERGY COMPANY
BELL FEDERAL GC B#1
San Juan County, New Mexico
36.832426° N, 108.167760° W

PROJECT NUMBER: 07A1988001

FIGURE
1



ENSOLUM
Environmental & Hydrogeologic Consultants

SVE SYSTEM CONFIGURATION

HILCORP ENERGY COMPANY
BELL FEDERAL GC B#1
San Juan County, New Mexico
36.832426° N, 108.167760° W

PROJECT NUMBER: 07A1988001

FIGURE

2

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TABLES

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TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
Hilcorp Energy Company - Bell Federal GC B#1
San Juan County, New Mexico

Ensolum Project No. 07A1988001

Date	Total Operational Hours	Delta Hours
12/7/2022	18,316.1	---
3/9/2023	19,509.7	1,193.6

Time Period	December 8 to December 31, 2022	January 1 to January 31, 2023	February 1 to February 28, 2023	March 1 to March 9, 2023
Days	23	31	28	9
Avg. Nominal Daylight Hours	9	10	10	11
Available Runtime Hours	207	310	280	99

Quarterly Available Daylight Runtime Hours	**896**
Quarterly Runtime Hours	**1,193.6**
Quarterly % Runtime	**133.2%**

Month	Days	Nominal Daylight Hours	Total Month Hours
January	31	10	310
February	28	10	280
March	31	11	341
April	30	12	360
May	31	13	403
June	30	14	420
July	31	14	434
August	31	13	403
September	30	12	360
October	31	11	341
November	30	10	300
December	31	9	279

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS
Hilcorp Energy Company - Bell Federal GC B#1
San Juan County, New Mexico

Ensolum Project No. 07A1988001

Date	Inlet PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (%)	Carbon Dioxide (%)
1/24/2018	1,435	280	200	<5.0	38.0	30,000	--	--
8/17/2018	1,873	160	380	21.0	320	18,000	--	--
3/22/2019	1,607	490	920	24.0	480	NA	--	--
6/18/2019	1,026	72.0	270	27.0	290	NA	--	--
9/25/2019	1,762	220	480	21.0	440	35,000	--	--
12/16/2019	1,902	130	840	21.0	220	22,000	--	--
3/10/2020	1,171	120	380	19.0	330	31,000	--	--
6/25/2020	978.0	180	430	25.0	480	45,000	--	--
9/16/2020	1,766	186	433	18.0	497	32,100	18.2%	3.29%
12/8/2020	1,741	114	292	10.6	324	16,000	17.3%	4.45%
3/23/2021	1,252	45	86.3	2.3	95.4	7,930	20.2%	<0.500%
6/10/2021	165.8	8.5	20	<0.50	20.0	5,700	17.3%	2.21%
9/8/2021	NM	130	240	5.9	150	33,000	--	--
12/15/2021	1,374	95	160	11.0	220	24,098	16.3%	3.32%
3/16/2022	1,096	53	120	<0.50	82	26,000	16.8%	3.01%
6/16/2022	708	24	69	<5.0	38	13,000	21.0%	0.82%
9/8/2022	545	50.2	129	4.99	612	10,500	17.7%	2.80%
12/7/2022	675	52	74	<5.00	35	13,000	17.0%	3.68%
3/9/2023	1,285	54	120	<2.5	54	15,000	16.9%	4.03%

Notes:

GRO: gasoline range hydrocarbons

µg/L: microgram per liter

PID: photoionization detector

ppm: parts per million

TVPH: total volatile petroleum hydrocarbons

%: percent

--: not sampled

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

ENSOLUM

TABLE 3
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Hilcorp Energy Company - Bell Federal GC B#1
San Juan County, New Mexico

Ensolum Project No. 07A1988001

Flow and Laboratory Analysis

Date	Inlet PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
1/24/2018	1,435	280	200	*5.0*	38	30,000
8/17/2018	1,873	160	380	21	320	18,000
3/22/2019	1,607	490	920	24	480	--
6/18/2019	1,026	72	270	27	290	--
9/25/2019	1,762	220	480	21	440	35,000
12/16/2019	1,902	130	840	21	220	22,000
3/10/2020	1,171	120	380	19	330	31,000
6/25/2020	978	180	430	25	480	45,000
9/16/2020	1,766	186	433	18	497	32,100
12/8/2020	1,741	114	292	11	324	16,000
3/23/2021	1,252	45	86	2	95	7,930
6/10/2021	166	9	20	*0.50*	20	5,700
9/8/2021	--	130	240	6	150	33,000
12/15/2021	1,374	95	160	11	220	24,098
3/16/2022	1,096	53	120	*0.50*	82	26,000
6/16/2022	708	24	69	*5.00*	38	13,000
9/8/2022	545	50	129	4.99	612	10,500
12/7/2022	675	52	74	*5.00*	35	13,000
3/9/2023	1,285	54	120	*2.50*	54	15,000
Average	1,242	130	297	12	249	22,196

Vapor Extraction Summary

Date	Flow Rate (cfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
1/24/2018	40	164,400	164,400	0.042	0.030	0.001	0.0057	4.5
8/17/2018	33	5,240,130	5,075,730	0.027	0.036	0.0016	0.022	3.0
3/22/2019	32	9,176,130	3,936,000	0.039	0.078	0.0027	0.048	--
6/18/2019	32	11,096,130	1,920,000	0.034	0.071	0.0031	0.046	--
9/25/2019	33	13,610,730	2,514,600	0.018	0.046	0.0030	0.045	3.3
12/16/2019	32	15,513,450	1,902,720	0.021	0.079	0.0025	0.039	3.4
3/10/2020	29	17,246,490	1,733,040	0.014	0.066	0.0022	0.030	2.9
6/25/2020	29	19,123,950	1,877,460	0.016	0.044	0.0024	0.044	4.1
9/16/2020	31	20,825,850	1,701,900	0.021	0.050	0.0025	0.057	4.5
12/8/2020	30	22,049,850	1,224,000	0.017	0.041	0.0016	0.046	2.7
3/23/2021	30	23,122,650	1,072,800	0.0089	0.021	0.00073	0.024	1.3
6/10/2021	33	23,514,690	392,040	0.0033	0.0066	0.00017	0.0071	0.84
9/8/2021	33	23,831,490	316,800	0.0085	0.0160	0.00039	0.010	2.4
12/15/2021	33	26,136,210	2,304,720	0.014	0.025	0.0010	0.023	3.5
3/16/2022	33	27,701,202	1,564,992	0.0091	0.017	0.00071	0.019	3.1
6/16/2022	25	29,520,102	1,818,900	0.0036	0.009	0.00026	0.0056	1.8
9/8/2022	31	31,835,244	2,315,142	0.0043	0.011	0.00058	0.038	1.4
12/7/2022	29	34,162,320	2,327,076	0.0055	0.011	0.00054	0.035	1.3
3/9/2023	29	36,239,184	2,076,864	0.0057	0.011	0.00041	0.0048	1.5
			Average	0.016	0.035	0.001	0.029	2.7

Flow and Laboratory Analysis

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
1/24/2018	69	69	2.9	2.0	0.051	0.39	307	0.15
8/17/2018	2,632	2,564	70	92	4.1	57	7,593	3.8
3/22/2019	4,682	2,050	80	159	5.5	98	--	--
6/18/2019	5,682	1,000	33.6	71	3.1	46	--	--
9/25/2019	6,952	1,270	23	59	3.8	57	4,154	2.1
12/16/2019	7,943	991	21	78	2.5	39	3,380	1.7
3/10/2020	8,939	996	14	66	2.2	30	2,863	1.4
6/25/2020	10,018	1,079	18	47	2.6	47	4,447	2.2
9/16/2020	10,933	915	19	46	2.3	52	4,090	2.0
12/8/2020	11,613	680	11.4	28	1.1	31	1,835	0.92
3/23/2021	12,209	596	5.3	12.6	0.43	14.0	800	0.40
6/10/2021	12,407	198	0.66	1.30	0.035	1.41	167	0.083
9/8/2021	12,567	160	1.4	2.6	0.06	1.7	382	0.19
12/15/2021	13,731	1,164	16	29	1.2	27	4,101	2.1
3/16/2022	14,521	790	7.2	14	0.561	14.7	2,444	1.2
6/16/2022	15,734	1,213	4.4	11	0.31	6.8	2,211	1.1
9/8/2022	16,979	1,245	5.4	14	0.72	46.9	1,696	0.8
12/7/2022	18,316	1,337	7.4	15	0.72	46.9	1,704	0.9
3/9/2023	19,510	1,194	6.9	13	0.49	5.8	1,812	0.9
		Total Mass Recovery to Date	346	759	32	623	43,987	22

Notes:

cf: cubic feet
cfm: cubic feet per minute
µg/L: micrograms per liter
lb/hr: pounds per hour
--: not sampled
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
gray: laboratory reporting limit used for calculating emissions

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APPENDIX A

Field Notes

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 1-12-23
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours **(take photo)**	18733.2	0934
Pre K/O Vacuum (IWC)	23	
Thermal Anemometer Flow (fpm)	1066	
Thermal Anemometer Temp (C)	10.55	
Inlet PID	870.9	
Exhaust PID	910.5	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

TIMER SETTINGS

Month	Timer Setting
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: **SAMPLE TIME:**
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE01				
SVE02				
SVE03		670.9		
SVE04		1158		

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	RECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

- Did not conduct a site visit last week due to weather/road conditions.
- Drained ~ ½ g of product from MW-3.
- Insufficient volume in MW-2.

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 1-18
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	18784.5	1418
Pre K/O Vacuum (IWC)	23	
Thermal Anemometer Flow (fpm)	813.9	
Thermal Anemometer Temp (C)	17.55	
Inlet PID	679.4	
Exhaust PID	874.2	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

TIMER SETTINGS	
Month	Timer Setting
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: SAMPLE TIME:
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03		714.9	
SVE04		286.2	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 2-2-23
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours **(take photo)**	19011.3	1426
Pre K/O Vacuum (IWC)	21	
Thermal Anemometer Flow (fpm)	89.96	
Thermal Anemometer Temp (C)	13.55	
Inlet PID	676.4	
Exhaust PID	694.3	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: **SAMPLE TIME:**
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03		742.9	
SVE04		139.3	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 2-28
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL |

SVE SYSTEM	READING	TIME
Blower Hours **(take photo)**	19379.9	1101
Pre K/O Vacuum (IWC)	22	
Thermal Anemometer Flow (fpm)	901.9	
Thermal Anemometer Temp (C)	11.95	
Inlet PID	1626	
Exhaust PID	1718	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID:	**SAMPLE TIME:**
Analytes:	TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS	

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03		1003	
SVE04		2570	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

Drained 1/4 g of LNAPL from SVE-03.
Insufficient volume in SVE-02 to purge.

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 3-9
TIME ONSITE:

O&M PERSONNEL: D Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS:	KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours **(take photo)**	19509.7	1357
Pre K/O Vacuum (IWC)	21	
Thermal Anemometer Flow (fpm)	885.2	
Thermal Anemometer Temp (C)	12.35	
Inlet PID	1285	
Exhaust PID	1519	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID:	**SAMPLE TIME:**
Analytes:	TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS	
Change in Well Operation:	

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03		1047	
SVE04		2477	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 3-27
TIME ONSITE: _____

O&M PERSONNEL: _____
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	19707.3	1217
Pre K/O Vacuum (IWC)	22	
Thermal Anemometer Flow (fpm)	535	
Thermal Anemometer Temp (C)	13.5	
Inlet PID	1383	
Exhaust PID	1216	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

TIMER SETTINGS	
Month	Timer Setting
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: **SAMPLE TIME:**

Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)

OPERATING WELLS

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03		1229	
SVE04		2153	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

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APPENDIX B

Project Photographs

PROJECT PHOTOGRAPHS
Bell Federal GC B#1
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 1 Runtime meter taken on December 7, 2022 at 9:50 AM Hours = 18,316.1		
Photograph 2 Runtime meter taken on March 9, 2023 at 1:57 PM Hours = 19,509.7		

Ensolum, LLC | Environmental & Hydrogeologic Consultants
Durango, Colorado | info@ensolum.com

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APPENDIX C

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

March 27, 2023

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

RE: Bell Fed GC B1 OrderNo.: 2303593

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/10/2023 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 **2303593**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: SVE-1
Project: Bell Fed GC B1
Collection Date: 3/9/2023 2:00:00 PM
Lab ID: 2303593-001 **Matrix:** AIR **Received Date:** 3/10/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	54	2.5		µg/L	25	3/16/2023 5:45:00 PM
Toluene	120	2.5		µg/L	25	3/16/2023 5:45:00 PM
Ethylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2,4-Trimethylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,3,5-Trimethylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2-Dichloroethane (EDC)	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2-Dibromoethane (EDB)	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Naphthalene	ND	5.0		µg/L	25	3/16/2023 5:45:00 PM
1-Methylnaphthalene	ND	10		µg/L	25	3/16/2023 5:45:00 PM
2-Methylnaphthalene	ND	10		µg/L	25	3/16/2023 5:45:00 PM
Acetone	ND	25		µg/L	25	3/16/2023 5:45:00 PM
Bromobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Bromodichloromethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Bromoform	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Bromomethane	ND	5.0		µg/L	25	3/16/2023 5:45:00 PM
2-Butanone	ND	25		µg/L	25	3/16/2023 5:45:00 PM
Carbon disulfide	ND	25		µg/L	25	3/16/2023 5:45:00 PM
Carbon tetrachloride	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Chlorobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Chloroethane	ND	5.0		µg/L	25	3/16/2023 5:45:00 PM
Chloroform	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Chloromethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
2-Chlorotoluene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
4-Chlorotoluene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
cis-1,2-DCE	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
cis-1,3-Dichloropropene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	25	3/16/2023 5:45:00 PM
Dibromochloromethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Dibromomethane	ND	5.0		µg/L	25	3/16/2023 5:45:00 PM
1,2-Dichlorobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,3-Dichlorobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,4-Dichlorobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Dichlorodifluoromethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,1-Dichloroethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,1-Dichloroethene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2-Dichloropropane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,3-Dichloropropane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
2,2-Dichloropropane	ND	2.5		µg/L	25	3/16/2023 5:45:00 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 **2303593**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: SVE-1
Project: Bell Fed GC B1
Collection Date: 3/9/2023 2:00:00 PM
Lab ID: 2303593-001 **Matrix:** AIR **Received Date:** 3/10/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,1-Dichloropropene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Hexachlorobutadiene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
2-Hexanone	ND	25		µg/L	25	3/16/2023 5:45:00 PM
Isopropylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
4-Isopropyltoluene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
4-Methyl-2-pentanone	ND	25		µg/L	25	3/16/2023 5:45:00 PM
Methylene chloride	ND	7.5		µg/L	25	3/16/2023 5:45:00 PM
n-Butylbenzene	ND	7.5		µg/L	25	3/16/2023 5:45:00 PM
n-Propylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
sec-Butylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Styrene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
tert-Butylbenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,1,1,2-Tetrachloroethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,1,2,2-Tetrachloroethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Tetrachloroethene (PCE)	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
trans-1,2-DCE	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
trans-1,3-Dichloropropene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2,3-Trichlorobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2,4-Trichlorobenzene	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,1,1-Trichloroethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,1,2-Trichloroethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Trichloroethene (TCE)	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Trichlorofluoromethane	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
1,2,3-Trichloropropane	ND	5.0		µg/L	25	3/16/2023 5:45:00 PM
Vinyl chloride	ND	2.5		µg/L	25	3/16/2023 5:45:00 PM
Xylenes, Total	54	3.8		µg/L	25	3/16/2023 5:45:00 PM
Surr: Dibromofluoromethane	94.2	70-130		%Rec	25	3/16/2023 5:45:00 PM
Surr: 1,2-Dichloroethane-d4	84.3	70-130		%Rec	25	3/16/2023 5:45:00 PM
Surr: Toluene-d8	119	70-130		%Rec	25	3/16/2023 5:45:00 PM
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	25	3/16/2023 5:45:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	15000	120		µg/L	25	3/16/2023 5:45:00 PM
Surr: BFB	101	70-130		%Rec	25	3/16/2023 5:45:00 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.		

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ANALYTICAL SUMMARY REPORT

March 24, 2023

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

Work Order: B23030909 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 3/14/2023 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B23030909-001	2303593-001B, SVE-1	03/09/23 14:00	03/14/23	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

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

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

Report Approved By:

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Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B23030909-001
Client Sample ID: 2303593-001B, SVE-1

Report Date: 03/24/23
Collection Date: 03/09/23 14:00
DateReceived: 03/14/23
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	16.88	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Nitrogen	78.44	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Carbon Dioxide	4.03	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Methane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Ethane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Propane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Hexanes plus	0.65	Mol %		0.01		GPA 2261-95	03/15/23 09:51 / ikc
Propane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
Hexanes plus	0.274	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
GPM Total	0.274	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
GPM Pentanes plus	0.274	gpm		0.001		GPA 2261-95	03/15/23 09:51 / ikc
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	31			1		GPA 2261-95	03/15/23 09:51 / ikc
Net BTU per cu ft @ std cond. (LHV)	29			1		GPA 2261-95	03/15/23 09:51 / ikc
Pseudo-critical Pressure, psia	556			1		GPA 2261-95	03/15/23 09:51 / ikc
Pseudo-critical Temperature, deg R	253			1		GPA 2261-95	03/15/23 09:51 / ikc
Specific Gravity @ 60/60F	1.03			0.001		D3588-81	03/15/23 09:51 / ikc
Air, %	77.11			0.01		GPA 2261-95	03/15/23 09:51 / ikc
- The analysis was not corrected for air.							
COMMENTS							
-						-	03/15/23 09:51 / ikc

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

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

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B23030909 **Report Date:** 03/24/23

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**									Batch: R398983	
Lab ID: **B23030934-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_230315A			03/15/23 12:58	
Oxygen		21.2	Mol %	0.01				0	20	
Nitrogen		78.2	Mol %	0.01				0.0	20	
Carbon Dioxide		0.55	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		<0.01	Mol %	0.01					20	
Lab ID: **LCS031523**	11	Laboratory Control Sample				Run: GCNGA-B_230315A			03/15/23 13:25	
Oxygen		0.61	Mol %	0.01	122	70	130			
Nitrogen		5.94	Mol %	0.01	99	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		74.9	Mol %	0.01	100	70	130			
Ethane		5.95	Mol %	0.01	99	70	130			
Propane		4.94	Mol %	0.01	100	70	130			
Isobutane		1.95	Mol %	0.01	97	70	130			
n-Butane		1.95	Mol %	0.01	97	70	130			
Isopentane		0.99	Mol %	0.01	99	70	130			
n-Pentane		0.99	Mol %	0.01	99	70	130			
Hexanes plus		0.80	Mol %	0.01	100	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

ENERGY LABORATORIES
Trust our People. Trust our Data.
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Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Work Order Receipt Checklist

Hall Environmental

B23030909

Login completed by:	Leslie S. Cadreau	Date Received:	3/14/2023
Reviewed by:	gmccartney	Received by:	tae
Reviewed Date:	3/17/2023	Carrier name:	FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	12.8°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

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

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

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

Contact and Corrective Action Comments:

None

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR:	Energy Labs -Billings	COMPANY:	Energy Laboratories	PHONE: (406) 869-6253	FAX: (406) 252-6069
ADDRESS:	1120 South 27th Street			ACCOUNT #:	EMAIL:
CITY, STATE, ZIP:	Billings, MT 59107				

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2303593-001B	SVE-1	TEDLAR	Air	3/9/2023 2:00:00 PM	1	FIXED GASES

B23030909

SPECIAL INSTRUCTIONS / COMMENTS:

Relinquished By:	Date: 3/10/2023	Time: 8:55 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Jessica Edwards	Date: 3.14.23	Time: 0745

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ____ ℃ Attempt to Cool ? ____
Comments: ____

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: 2303593 RcptNo: 1

Received By: Tracy Casarrubias 3/10/2023 7:10:00 AM

Completed By: Tracy Casarrubias 3/10/2023 8:53:57 AM

Reviewed By: ~~KPG 3-10-23~~ jn 3/10/23 KPG 3.10.23

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 ☐ jn 3/10/23
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 ☑
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: KPG 3.10.23

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:

17. Cooler Information

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

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

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

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Bell Fed GC B 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☐ Yes ☑ No

# of Coolers: 1

Cooler Temp(Including CF): N/A (°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. 2303593	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	8015 TVPH	Fixed gases O_2 & CO_2				
3-9	1400	air	SVE-1	2 Tedlar		001								✓			✓	✓				

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3-9	1545		Chase Want		3/9/23	1545
3/9/23	1804			Courier	3/10/23	7:10

Remarks:

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 207683

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 207683
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Continue with O & M schedule. 2. Submit next quarterly report by July 31, 2023.	5/11/2023