



75 Suttle Street
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27 January 2022

David Bounds
Hilcorp
382 Road 3100
Aztec, NM 87410
RE: Braden Head

Enclosed are the results of analyses for samples received by the laboratory on 01/13/22 15:20. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, reading 'Jeremy D. Allen', is written in a cursive style.

Jeremy D Allen For Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: T104704514-22-13

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



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Hilcorp
382 Road 3100
Aztec NM, 87410

Project: Braden Head
Project Name / Number: South
Project Manager: David Bounds

Reported:
01/27/22 16:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Gerk GasCom B1M	2201104-01	Water	01/07/22 00:00	01/13/22 15:20	

Green Analytical Laboratories

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Jeremy D Allen For Debbie Zufelt, Reports Manager

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**Gerk GasCom B1M
Area 8**

2201104-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Chloride*	66.4	100	3.04	mg/L	100	01/24/22 13:02	EPA300.0		AES
pH*	7.81			pH Units	1	01/14/22 10:50	EPA150.1	H1	VJW
pH Temperature, degrees C	20.3			pH Units	1	01/14/22 10:50	EPA150.1	H1	VJW
Total Dissolved Solids*	10100	20.0		mg/L	2	01/17/22 09:50	EPA160.1	H1	VJW
Sulfate*	6820	200	24.8	mg/L	200	01/25/22 09:52	EPA300.0		AES

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General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B220128 - General Prep - Wet Chem										
Blank (B220128-BLK1)				Prepared & Analyzed: 01/17/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B220128-SRM1)				Prepared & Analyzed: 01/17/22						
Total Dissolved Solids	395	10.0	mg/L	400		98.8	85-115			
Batch B220171 - General Prep - Wet Chem										
Reference (B220171-SRM1)				Prepared & Analyzed: 01/14/22						
pH	6.97		pH Units	7.00		99.6	98.57-101.42			
Batch B220205 - IC- Ion Chromatograph										
Blank (B220205-BLK1)				Prepared: 01/21/22 Analyzed: 01/24/22						
Chloride	ND	1.00	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B220205-BS1)				Prepared: 01/21/22 Analyzed: 01/24/22						
Chloride	25.3	1.00	mg/L	25.0		101	90-110			
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110			
LCS Dup (B220205-BSD1)				Prepared: 01/21/22 Analyzed: 01/24/22						
Chloride	25.0	1.00	mg/L	25.0		100	90-110	0.986	20	
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110	0.00830	20	

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Notes and Definitions

H1 Sample was received several days after collected and subsequently analyzed past hold time.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis
*Results reported on as received basis unless designated as dry.

RPD Relative Percent Difference

LCS Laboratory Control Sample (Blank Spike)

RL Report Limit

MDL Method Detection Limit

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Client: Hilcorp	Asset: South	Phone# 505-419-3410	Contact David Bounds
Address: 9A CR# 5793, Farmington NM 87401		E-Mail Address: dbounds@hilcorp.com	



75 Suttle Street
Durango, CO 81303
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FAX: 970-247-4227

CHAIN OF CUSTODY RECORD

GAL Work Order # **2201-104**

PO#

Project Name:

Sample Location:

(1)BumperSpring, (2)CompressorDischarge, (3)Flowline, (4)Meter, (5)Oil Tank
(6)PigLauncher, (7)PigReceiver, (8)Pipeline, (9)Pit Tank, (10)PostFilter, (11)PreFilter
(12)SeparatorInlet, (13)SeparatorOutlet, (14)SeparatorDump, (15)SWDInlet
(16)SWDOutlet, (17)TransferPump, (18)ValveCan, (19)WaterTank, (20)Wellhead
(21)Other

Sample Type:

(1)Casing, (2)CO2GasTube, (3)Coupon, (4)Water, (5)H2SGasTube, (6)Metals
(7)O2GasTube, (8)PipeSection, (9)Residual, (10)Sludge, (11)Solid, (12)Tubing, (13)Other

Collection								Preservative				Analyses Required			
Well Name (Sample Name)	Area	Date	Time	Collected By: (Init.)	Sample Location	Sample Type	No. of Containers	Filtered: Y / N	Unpreserved	H2SO4	Other:	Iron and Manganese	Phosphate	Full Water API	Drillstem
1. GerK Gas Com B 1M	8	1/7		CM	20	4	1	N	Y	N	N				X
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
16.															
17.															
18.															
19.															
20.															

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
Chris P. Johnson	1/13/22	3:20	Chris P. Johnson	1/13/22	1520
Chris P. Johnson	1/13/22	16:55	Kangaroo Express	1/13/22	1655
Kangaroo Express	1/14/22	0830	Linda Jumper	1/14/22	0830

5.5/5.4 on Dec 28/21 #3

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
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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

COMMENTS

Action 76430

COMMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 76430
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

COMMENTS

Created By	Comment	Comment Date
mkuehling	for record only	9/13/2022

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Created By	Condition	Condition Date
mkuehling	HIGH tds 10100 -	8/3/2022