



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
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www.greenanalytical.com

20 June 2022

Bill Eaves
Hilcorp
382 Road 3100
Aztec, NM 87410
RE: Braden Head

Enclosed are the results of analyses for samples received by the laboratory on 06/07/22 12:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Brenna Kampf'. The signature is fluid and cursive, with the first and last names being more prominent.

Brenna Kampf
Project 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: T104704514-22-14

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: T104704398-22-15



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Hilcorp
382 Road 3100
Aztec NM, 87410

Project: Braden Head
Project Name / Number: East
Project Manager: Bill Eaves

Reported:
06/20/22 13:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SJ 30-6 unit 485	2206089-01	Water	06/01/22 00:00	06/07/22 12:00	
SJ 27-5 107M	2206089-02	Water	06/06/22 00:00	06/07/22 12:00	

Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Brenna Kampf'.

Brenna Kampf, Project Manager

Released to Imaging: 9/1/2022 3:13:44 PM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



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Project: Braden Head
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Reported:
06/20/22 13:56

**SJ 30-6 unit 485
Area 11**

2206089-01 (Produced Water)

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

Phosphate (PO4)	1.54	0.154	0.0503	mg/L	1	06/16/22 09:47	EPA365.1/Calc		AES
Phosphorus, Total	0.502	0.0500	0.0164	mg P/L	1	06/16/22 09:47	EPA365.1		AES

Potentially Dissolved Metals by ICP

Iron*	55.9	1.00	0.711	mg/L	20	06/14/22 18:03	EPA200.7		AES
Manganese*	2.50	0.400	0.149	mg/L	20	06/14/22 18:03	EPA200.7		AES

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Brenna Kampf, Project Manager

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Project: Braden Head
Project Name / Number: East
Project Manager: Bill Eaves

Reported:
06/20/22 13:56

**SJ 27-5 107M
Area 14**

2206089-02 (Ground Water)

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

Chloride*	13.8	20.0	1.11	mg/L	20	06/13/22 23:04	EPA300.0		AES
pH*	10.0			pH Units	1	06/08/22 09:30	EPA150.1	H1	PMS
pH Temperature, degrees C	18.8			pH Units	1	06/08/22 09:30	EPA150.1	H1	PMS
Total Dissolved Solids*	575	10.0		mg/L	1	06/09/22 16:30	EPA160.1		VJW
Sulfate*	37.1	20.0	2.48	mg/L	20	06/13/22 23:04	EPA300.0		AES

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Page 4 of 6 2206089 GAL_no QC FINAL 06 20 22 1356 06/20/22 13:57:04



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Hilcorp 382 Road 3100 Aztec NM, 87410	Project: Braden Head Project Name / Number: East Project Manager: Bill Eaves	Reported: 06/20/22 13:56
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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

Green Analytical Laboratories

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Client: Hilcorp	Asset: East	Phone# 505-860-5425	Contact Bill Eaves
Address: 9A CR# 5793, Farmington NM 87401		E-Mail Address: weaves@hilcorp.com	



75 Suttle Street
Durango, CO 81303
Phone: 970-247-4220
FAX: 970-247-4227

CHAIN OF CUSTODY RECORD

GAL Work Order # 2206-089

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

25.8C
NO ice

6.5C
on ice
Laser #2
PMS

Collection							Preservative				Analyses Required			
Well Name (Sample Name)	Area	Date	Collected By: (Init.)	Sample Location	Sample Type	No. of Containers	Filtered: Y / N	Unpreserved	H2SO4	Other:	Iron and Manganese	Phosphate	Full Water API	Braiden Head
2206-089 SJ 30-6 unit 485	11	6/1/2022	BE	20	4	1					X	X		
2.														
3.														
02 SJ 27-5 107M	14	6/6/2022	BH	20	4	1								X
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														
16.														
17.														
18.														
19.														
20.														

Relinquished by:

Date:

Time:

Received By:

Date:

Time:

Bill Eaves 6-7-22 12:00
Christina Clark 6/7/22 1200
Christina Clark 6/7/22 1655
Kangaroo Express 6/8/22 0830
Funnel Dumper 6/8/22 0830

District I
1625 N. French Dr., Hobbs, NM 88240
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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

CONDITIONS

Action 119436

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 119436
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	TDS 575	9/1/2022