

Burroughs Corn 1 Well  
30-045-06149



75 Suttle Street  
Durango, CO 81303  
970.247.4220 Phone  
970.247.4227 Fax  
www.greenanalytical.com

14 November 2019

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 11/06/19 15:36.  
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt  
Reports Manager

NMOC  
NOV 21 2019  
DISTRICT III

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.

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.



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382 Road 3100  
Aztec NM, 87410

Project: Braden Head  
Project Name / Number: [none]  
Project Manager: David Bounds

Reported:  
11/14/19 16:26

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Burroughs Com 1 Bradenhead	1911078-01	Water	11/05/19 00:00	11/06/19 15:36	Q1
Burroughs Com 1 Intermediate	1911078-02	Water	11/05/19 00:00	11/06/19 15:36	Q1

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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**Burroughs Com 1 Bradenhead**

**1911078-01 (Produced Water)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
<b>General Chemistry</b>									
Chloride*	26.6	25.0	4.82	mg/L	25	11/13/19 12:32	EPA300.0		AES
pH*	8.28			pH Units	1	11/07/19 08:55	EPA150.1	H4	FGH
Total Dissolved Solids*	5010	10.0		mg/L	1	11/07/19 14:48	EPA160.1		VJL
Sulfate*	3210	125	36.9	mg/L	125	11/13/19 15:49	EPA300.0		AES

Green Analytical Laboratories

*Debbie Zufelt*

Debbie Zufelt, Reports Manager

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Project Name / Number: [none]  
Project Manager: David Bounds

Reported:  
11/14/19 16:26

**Burroughs Com 1 Intermediate**

**1911078-02 (Produced Water)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
<b>General Chemistry</b>									
Chloride*	63.9	100	19.3	mg/L	100	11/13/19 12:50	EPA300.0		AES
pH*	9.60			pH Units	1	11/07/19 08:55	EPA150.1	H4	FGH
Total Dissolved Solids*	5220	10.0		mg/L	1	11/07/19 14:50	EPA160.1		VJL
Sulfate*	3360	100	29.5	mg/L	100	11/13/19 12:50	EPA300.0		AES

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*Debbie Zufelt*

Debbie Zufelt, Reports Manager

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Project: Braden Head  
Project Name / Number: [none]  
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Reported:  
11/14/19 16:26

#### Notes and Definitions

Q1 Sample received outside of acceptable temperature range for analyses requiring cold storage.

H4 pH analysis performed more than 48 hours after sampling.

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: 382 Road 3100 Aztec, NM 87410 E-Mail Address: [dbounds@hilcorp.com](mailto:dbounds@hilcorp.com)



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**Sample Location:**

(1) Bumper Spring, (2) Compressor Discharge, (3) Flowline, (4) Meter, (5) Oil Tank  
 (6) Pig Launcher, (7) Pig Receiver, (8) Pipeline, (9) Pit Tank, (10) Post Filter, (11) Pre Filter  
 (12) Separator Inlet, (13) Separator Outlet, (14) Separator Dump, (15) SWD Inlet  
 (16) SWD Outlet, (17) Transfer Pump, (18) Valve Can, (19) Water Tank, (20) Wellhead  
 (21) Other

**Sample Type:**

(1) Casing, (2) CO2 Gas Tube, (3) Coupon, (4) Water, (5) H2S Gas Tube, (6) Metals  
 (7) O2 Gas Tube, (8) Pipe Section, (9) Residual, (10) Sludge, (11) Solid, (12) Tubing, (13) Other

22.7°C  
 No. 1  
 2.4/2.6°C  
 FH

FH 11/07

ice #1

Collection							Preservative			Analyses Required					
Well Name (Sample Name)	PSI	Temp	Area	Date	Collected By: (Init.)	Sample Location	Sample Type	No. of Containers	Filtered: Y / N	Unpreserved	Other: <i>Bradenhead</i>	Iron and Manganese	Phosphate	Full Water API	Formational com
<i>1911-078-01</i> ↓															
1. <i>Burroughs Com 1 - Bradenhead</i>			<i>9</i>	<i>11/5/19</i>	<i>CA</i>	<i>20</i>	<i>4</i>	<i>1</i>	<i>N</i>	<i>✓</i>	<i>✓</i>				
2. <i>Burroughs Com 1 - Intermediate</i>			<i>9</i>	<i>11/5/19</i>	<i>CA</i>	<i>20</i>	<i>4</i>	<i>1</i>	<i>N</i>	<i>✓</i>	<i>✓</i>				
3. <i>1911-078-02</i> ↑															
4.															
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13.															
14.															

Relinquished by:	Date:	Time:
Chantel Clark	11-6-19	15:36
Kangaroo Express	11/6/19	14:55
Kangaroo Express	11/07/19	08:55
Fischer Harrel	11/07/19	08:55