

February 18, 2016

Report to:

Rod Branstetter
Aztec Drilling
P.O. Box 772771
2486 Downhill Dr.
Steamboat Springs, CO 80477

Bill to:

Rod Branstetter
Aztec Drilling
P.O. Box 772771
Steamboat Springs, CO 80477

Project ID:

ACZ Project ID: L28912

Rod Branstetter:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 10, 2016. This project has been assigned to ACZ's project number, L28912. Please reference this number in all future inquiries.

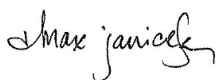
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L28912. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after March 19, 2016. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and approved this report.



Aztec Drilling

Project ID:

Sample ID: B HOFFNER 1-1

ACZ Sample ID: **L28912-01**

Date Sampled: 02/10/16 12:00

Date Received: 02/10/16

Sample Matrix: *Drinking Water*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Recoverable Digestion	M200.2 ICP-MS								02/12/16 14:29	enb

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0082			mg/L	0.0005	0.002	02/12/16 16:24	mfm
Barium, total recoverable	M200.8 ICP-MS	1	0.1121			mg/L	0.0005	0.003	02/12/16 16:24	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	02/12/16 16:24	mfm
Calcium, dissolved	M200.7 ICP	1	56			mg/L	0.1	0.5	02/16/16 15:15	gss
Chromium, total recoverable	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0005	0.002	02/12/16 16:24	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.0022	B		mg/L	0.0005	0.003	02/12/16 16:24	mfm
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	02/16/16 15:15	gss
Lead, total recoverable	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	02/12/16 16:24	mfm
Magnesium, dissolved	M200.7 ICP	1	5.3			mg/L	0.2	1	02/16/16 15:15	gss
Manganese, dissolved	M200.7 ICP	1	0.013	B		mg/L	0.005	0.03	02/16/16 15:15	gss
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	02/17/16 12:08	pta
Selenium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.001	0.005	02/12/16 16:24	mfm
Silica, dissolved	M200.7 ICP	1	63.2			mg/L	0.2	1	02/16/16 15:15	gss
Silver, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/12/16 16:24	mfm
Sodium, dissolved	M200.7 ICP	1	26.9			mg/L	0.2	1	02/16/16 15:15	gss
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	02/16/16 15:15	gss

Aztec Drilling

Project ID:

Sample ID: B HOFFNER 1-1

ACZ Sample ID: **L28912-01**

Date Sampled: 02/10/16 12:00

Date Received: 02/10/16

Sample Matrix: *Drinking Water*

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	215		*	mg/L	2	20	02/12/16 0:00	sck
Carbonate as CaCO3		1		U	*	mg/L	2	20	02/12/16 0:00	sck
Hydroxide as CaCO3		1		U	*	mg/L	2	20	02/12/16 0:00	sck
Total Alkalinity		1	215		*	mg/L	2	20	02/12/16 0:00	sck
Chloride	SM4500Cl-E	1	3.4		*	mg/L	0.5	2	02/15/16 14:30	mss2
Conductivity @25C	SM2510B	1	468		*	umhos/cm	1	10	02/12/16 16:23	sck
Fluoride	SM4500F-C	1	0.54		*	mg/L	0.05	0.3	02/12/16 13:56	sck
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		162			mg/L	0.2	5	02/18/16 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							02/12/16 9:01	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							02/12/16 13:55	aeb
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.79			mg/L	0.02	0.1	02/18/16 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.79		*	mg/L	0.02	0.1	02/11/16 2:00	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	02/11/16 2:00	pjb
pH (lab)	SM4500H+ B									
pH		1	8.2	H	*	units	0.1	0.1	02/12/16 0:00	sck
pH measured at		1	22.3		*	C	0.1	0.1	02/12/16 0:00	sck
Residue, Filterable (TDS) @180C	SM2540C	1	320		*	mg/L	10	20	02/12/16 13:18	sck
Sulfate	D516-07 - Turbidimetric	1	13.8		*	mg/L	1	5	02/15/16 11:28	mss2
Turbidity	M180.1 - Nephelometric	1	11.5		*	NTU	0.1	0.5	02/10/16 15:49	emk

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

Aztec Drilling

ACZ Project ID: **L28912**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L28912-01	WG398555	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG398601	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	Q6	Sample was received above recommended temperature.
	WG398555	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG398536	Fluoride	SM4500F-C	Q6	Sample was received above recommended temperature.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG398555	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG398424	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time precedes filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time precedes filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG398555	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
			SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG398542	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG398582	Sulfate	D516-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG398555	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.
SM2320B - Titration			RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).	
WG398418	Turbidity	M180.1 - Nephelometric	Q6	Sample was received above recommended temperature.	

Aztec Drilling

ACZ Project ID: **L28912**

Wet Chemistry

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Chloride	SM4500Cl-E
Sulfate	D516-07 - Turbidimetric

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Chloride	SM4500Cl-E
Sulfate	D516-07 - Turbidimetric

Aztec Drilling

ACZ Project ID: L28912
 Date Received: 02/10/2016 14:18
 Received By: ddp
 Date Printed: 2/10/2016

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody form or other directive shipping papers present?	X		
3) Does this project require special handling procedures such as CLP protocol?			X
4) Are any samples NRC licensable material?			X
5) If samples are received past hold time, proceed with requested short hold time analyses?	X		
6) Is the Chain of Custody form complete and accurate? The 'sampled by' field on the Chain of Custody was not completed.		X	
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?		X	

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? ¹	X		
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(μR/Hr)	Custody Seal Intact?
NA23361	16.6	<=6.0	14	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Aztec Drilling

ACZ Project ID: L28912
Date Received: 02/10/2016 14:18
Received By: ddp
Date Printed: 2/10/2016

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Laboratories, Inc. L28912

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name:	Address: <u>PO Box 772771</u>
Company: <u>AZTEC DRILLING COMPANY</u>	<u>STEAMBOAT SPRINGS CO 80477</u>
E-mail:	Telephone: <u>970 879 5252</u>

Copy of Report to:

Name:	E-mail:
Company: <u>SAME</u>	Telephone:

Invoice to:

Name:	Address:
Company: <u>SAME</u>	
E-mail:	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: _____ Sampler's Site Information State _____ Zip code _____ Time Zone _____

*Sampler's Signature: _____ *I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:	AZTEC PANEL											
PO#:												
Reporting state for compliance testing:												
Check box if samples include NRC licensed material?												
SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers									
<u>B HOFFNER 1-1</u>	<u>2/10/16</u> <u>1200</u>	<u>DW</u>	<u>4</u>									

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<u>R. Braut</u>	<u>2/10/16</u> <u>1418</u>	<u>Bor</u>	<u>2-10-16/1618</u>



L28912 Chain of Custody