



**RIO GRANDE
SILVER, INC.**

June 26, 2017

Colorado Department of Natural Resources
Division of Reclamation, Mining, and Safety
Attention: Minerals Program
1313 Sherman Street, Suite 215
Denver, Colorado 80203-2273

**RE: Bulldog Mine Operation, Permit No. M-1977-215, Revision No. AM-02
Water Quality Monitoring Plan; surface water quality data**

Minerals Program,

Please see the included Windy Gulch surface water sample results taken on May 1, 2017 in accordance with the Bulldog Mine Operation Environmental Protection Plan (EPP), Exhibit U.

Included are:

- 1) Figure 5 of Appendix 1
- 2) Sample location Map G-3
- 3) Windy Gulch surface analytical results from the May 1, 2017 sampling

Please call me at 719-658-1080 ext. 2701 if you have questions.

Best Regards,

A handwritten signature in blue ink that reads "Randy McClure".

Randy McClure
Consultant
Rio Grande Silver, Inc.
625 USFS Road 504.1A
Creede, CO 81130
(719) 658-1080 ext. 2701
rmcclure@hecla-mining.com

Figure 5

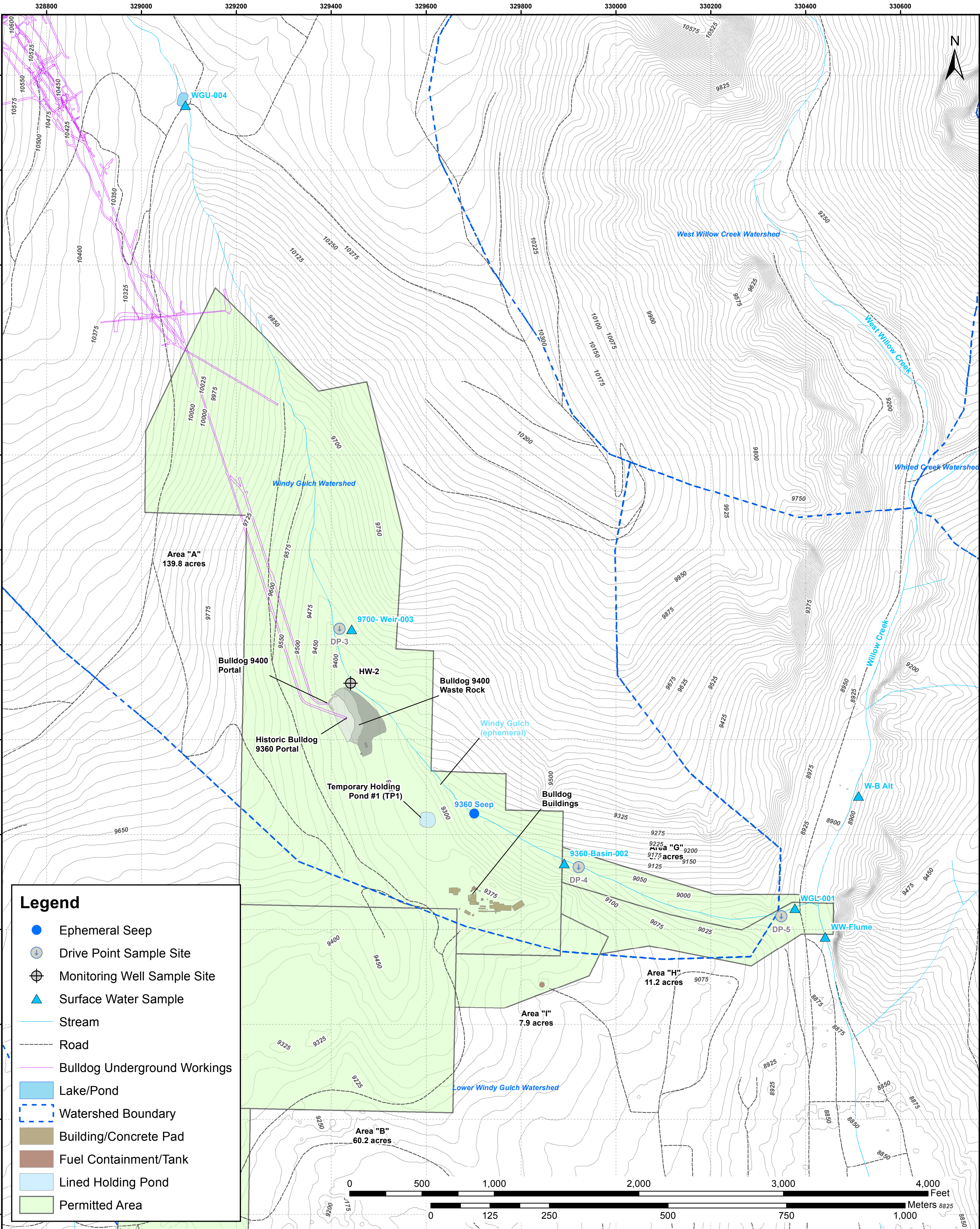
Surface Water analytical results for Windy Gulch sampled May 1, 2017.

Locations:

- 1) WGL
- 2) 9360 Basin
- 3) 9700 Weir
- 4) WGU

Refer to Map G-3, Appendix 4 for sample locations.

Windy Gulch is an ephemeral stream and typically only flows in the spring (April/May) in years when there is sufficient snow pack to create runoff.



**APPENDIX 4, MAP G-3: BULLDOG SURFACE WATER AND
GROUNDWATER SAMPLE SITES**



*Bulldog Mine
Creede, CO, USA*

DRWN BY: CLH
SCALE: 1:6,000
PROJECTION: UTM NAD83, Z13
DATE: 6/26/2017
SIGNATURE:

Randy McClure

May 19, 2017

Report to:

Randy McClure
Rio Grande Silver, Inc.
112 E. 12th St.
Creede, CO 81130

Bill to:

Randy McClure
Rio Grande Silver, Inc.
112 E. 12th St.
Creede, CO 81130

cc: Janet Shangraw

Project ID: BO37296

ACZ Project ID: L36878

Randy McClure:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 02, 2017. This project has been assigned to ACZ's project number, L36878. 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 L36878. 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 June 18, 2017. 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.



Sue Webber has reviewed and
approved this report.



Rio Grande Silver, Inc.

May 19, 2017

Project ID: BO37296

ACZ Project ID: L36878

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 6 miscellaneous samples from Rio Grande Silver, Inc. on May 2, 2017. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L36878. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following required further explanation not provided by the Extended Qualifier Report:

1. Oil and Grease - Due to multiple QC failures and negative sample values in the analytical run, we were not able to report a sample value. No further action could be taken since there was no additional sample volume remaining for re-analysis.

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-L

ACZ Sample ID: **L36878-01**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/08/17 15:30	spl
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/10/17 12:25	krh
Total Recoverable Digestion	M200.2 ICP-MS								05/03/17 13:39	enb
Total Recoverable Digestion	M200.2 ICP								05/04/17 5:40	gss

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-L

ACZ Sample ID: **L36878-01**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.29		*	mg/L	0.03	0.2	05/05/17 13:34	gss
Aluminum, total recoverable	M200.7 ICP	1	2.15			mg/L	0.03	0.2	05/04/17 18:14	gss
Arsenic, dissolved	M200.8 ICP-MS	1	0.0239			mg/L	0.0002	0.001	05/04/17 20:55	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0285			mg/L	0.0002	0.001	05/03/17 20:42	enb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 13:34	gss
Boron, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 12:27	gss
Cadmium, dissolved	M200.8 ICP-MS	1	0.0058			mg/L	0.0001	0.0005	05/04/17 20:55	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.0062			mg/L	0.0001	0.0005	05/03/17 20:42	enb
Calcium, dissolved	M200.7 ICP	1	21.7			mg/L	0.1	0.5	05/05/17 13:34	gss
Chromium, total recoverable	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0005	0.002	05/03/17 20:42	enb
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/09/17 11:16	aeh
Cobalt, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/04/17 18:14	gss
Copper, dissolved	M200.8 ICP-MS	1	0.0065			mg/L	0.0005	0.003	05/04/17 20:55	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.0078			mg/L	0.0005	0.003	05/03/17 20:42	enb
Iron, dissolved	M200.7 ICP	1	0.23			mg/L	0.02	0.05	05/05/17 13:34	gss
Iron, total recoverable	M200.7 ICP	1	1.11			mg/L	0.02	0.05	05/04/17 18:14	gss
Lead, dissolved	M200.8 ICP-MS	1	0.0012			mg/L	0.0001	0.0005	05/04/17 20:55	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.0025			mg/L	0.0001	0.0005	05/03/17 20:42	enb
Magnesium, dissolved	M200.7 ICP	1	2.4			mg/L	0.2	1	05/05/17 13:34	gss
Manganese, dissolved	M200.7 ICP	1	0.009	B		mg/L	0.005	0.03	05/05/17 13:34	gss
Manganese, total recoverable	M200.7 ICP	1	0.023	B		mg/L	0.005	0.03	05/04/17 18:14	gss
Mercury, total	M1631, Atomic Fluorescence	1	6.2			ng/L	0.2	0.5	05/09/17 10:02	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	05/05/17 13:34	gss
Nickel, total recoverable	M200.7 ICP	1		U		mg/L	0.008	0.04	05/04/17 18:14	gss
Potassium, dissolved	M200.7 ICP	1	1.9			mg/L	0.2	1	05/05/17 13:34	gss
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0003	05/04/17 20:55	mfm
Selenium, total recoverable	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0003	05/03/17 20:42	enb
Silica, dissolved	M200.7 ICP	1	26.1			mg/L	0.2	1	05/05/17 13:34	gss
Silica, total recoverable	M200.7 ICP	1	27.1		*	mg/L	0.2	1	05/05/17 12:27	gss
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/04/17 20:55	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.00009	B		mg/L	0.00005	0.0003	05/03/17 20:42	enb
Sodium, dissolved	M200.7 ICP	1	3.8			mg/L	0.2	1	05/05/17 13:34	gss
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/04/17 20:55	mfm
Uranium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/03/17 20:42	enb
Zinc, dissolved	M200.8 ICP-MS	1	1.25			mg/L	0.002	0.005	05/04/17 20:55	mfm

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-L

ACZ Sample ID: **L36878-01**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix: Surface Water

Zinc, total recoverable	M200.8 ICP-MS	1	1.28	*	mg/L	0.002	0.005	05/03/17 20:42	enb
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Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	14.0	B		mg/L	2	20	05/05/17 0:00	abd
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/05/17 0:00	abd
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/05/17 0:00	abd
Total Alkalinity		1	14.0	B		mg/L	2	20	05/05/17 0:00	abd
Carbon, dissolved organic (DOC)	SM5310B	1	4.9	B	*	mg/L	1	5	05/15/17 15:39	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			05/19/17 0:00	calc
Sum of Anions			1.6			meq/L			05/19/17 0:00	calc
Sum of Cations			1.6			meq/L			05/19/17 0:00	calc
Chemical Oxygen Demand	M410.4	1		U	*	mg/L	10	20	05/04/17 12:26	emk
Chloride	M300.0 - Ion Chromatography	1	1.09	B	*	mg/L	0.5	2.5	05/11/17 21:12	krh
Fluoride	SM4500F-C	1	0.22	B	*	mg/L	0.05	0.3	05/09/17 12:12	emk
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	05/19/17 0:00	calc
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.48			mg/L	0.02	0.1	05/19/17 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.48			mg/L	0.02	0.1	05/02/17 15:55	bce
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/02/17 15:55	bce
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1		U	*	mg/L	0.05	0.2	05/11/17 13:07	bce
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		0.2	B		mg/L	0.1	0.5	05/19/17 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	0.2	B	*	mg/L	0.1	0.5	05/10/17 22:33	pjb
pH (lab)	SM4500H+ B									
pH		1	7.4	H		units	0.1	0.1	05/05/17 0:00	abd
pH measured at		1	22.9			C	0.1	0.1	05/05/17 0:00	abd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.08		*	mg/L	0.02	0.05	05/11/17 22:57	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	164		*	mg/L	10	20	05/03/17 10:13	keh
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/02/17 16:14	els
Sulfate	M300.0 - Ion Chromatography	1	57.4		*	mg/L	0.5	2.5	05/11/17 21:12	krh
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/08/17 14:33	abd

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-D

ACZ Sample ID: **L36878-02**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/08/17 15:40	spl
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/10/17 12:38	krh
Total Recoverable Digestion	M200.2 ICP-MS								05/03/17 13:50	enb
Total Recoverable Digestion	M200.2 ICP								05/04/17 6:41	gss

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-D

ACZ Sample ID: **L36878-02**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.30		*	mg/L	0.03	0.2	05/05/17 13:37	gss
Aluminum, total recoverable	M200.7 ICP	1	2.13			mg/L	0.03	0.2	05/04/17 18:17	gss
Arsenic, dissolved	M200.8 ICP-MS	1	0.0225			mg/L	0.0002	0.001	05/04/17 20:58	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0281			mg/L	0.0002	0.001	05/03/17 20:51	enb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 13:37	gss
Boron, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 12:36	gss
Cadmium, dissolved	M200.8 ICP-MS	1	0.0057			mg/L	0.0001	0.0005	05/04/17 20:58	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.0061			mg/L	0.0001	0.0005	05/03/17 20:51	enb
Calcium, dissolved	M200.7 ICP	1	21.6			mg/L	0.1	0.5	05/05/17 13:37	gss
Chromium, total recoverable	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0005	0.002	05/03/17 20:51	enb
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/09/17 11:19	aeh
Cobalt, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/04/17 18:17	gss
Copper, dissolved	M200.8 ICP-MS	1	0.0061			mg/L	0.0005	0.003	05/04/17 20:58	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.0078			mg/L	0.0005	0.003	05/03/17 20:51	enb
Iron, dissolved	M200.7 ICP	1	0.24			mg/L	0.02	0.05	05/05/17 13:37	gss
Iron, total recoverable	M200.7 ICP	1	1.10			mg/L	0.02	0.05	05/04/17 18:17	gss
Lead, dissolved	M200.8 ICP-MS	1	0.0013			mg/L	0.0001	0.0005	05/04/17 20:58	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.0026			mg/L	0.0001	0.0005	05/03/17 20:51	enb
Magnesium, dissolved	M200.7 ICP	1	2.4			mg/L	0.2	1	05/05/17 13:37	gss
Manganese, dissolved	M200.7 ICP	1	0.008	B		mg/L	0.005	0.03	05/05/17 13:37	gss
Manganese, total recoverable	M200.7 ICP	1	0.024	B		mg/L	0.005	0.03	05/04/17 18:17	gss
Mercury, total	M1631, Atomic Fluorescence	1	6.1			ng/L	0.2	0.5	05/09/17 10:07	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	05/05/17 13:37	gss
Nickel, total recoverable	M200.7 ICP	1		U		mg/L	0.008	0.04	05/04/17 18:17	gss
Potassium, dissolved	M200.7 ICP	1	1.9			mg/L	0.2	1	05/05/17 13:37	gss
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0003	05/04/17 20:58	mfm
Selenium, total recoverable	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0003	05/03/17 20:51	enb
Silica, dissolved	M200.7 ICP	1	26.1			mg/L	0.2	1	05/05/17 13:37	gss
Silica, total recoverable	M200.7 ICP	1	31.5		*	mg/L	0.2	1	05/05/17 12:36	gss
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/04/17 20:58	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.0001	B		mg/L	0.00005	0.0003	05/03/17 20:51	enb
Sodium, dissolved	M200.7 ICP	1	3.7			mg/L	0.2	1	05/05/17 13:37	gss
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/04/17 20:58	mfm
Uranium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/03/17 20:51	enb
Zinc, dissolved	M200.8 ICP-MS	1	1.26			mg/L	0.002	0.005	05/04/17 20:58	mfm

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-D

ACZ Sample ID: **L36878-02**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix: Surface Water

Zinc, total recoverable M200.8 ICP-MS 1 1.29 * mg/L 0.002 0.005 05/03/17 20:51 enb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	14.4	B		mg/L	2	20	05/05/17 0:00	abd
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/05/17 0:00	abd
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/05/17 0:00	abd
Total Alkalinity		1	14.4	B		mg/L	2	20	05/05/17 0:00	abd
Carbon, dissolved organic (DOC)	SM5310B	1	5.3		*	mg/L	1	5	05/15/17 15:39	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			05/19/17 0:00	calc
Sum of Anions			1.6			meq/L			05/19/17 0:00	calc
Sum of Cations			1.6			meq/L			05/19/17 0:00	calc
Chemical Oxygen Demand	M410.4	1		U	*	mg/L	10	20	05/04/17 12:37	emk
Chloride	M300.0 - Ion Chromatography	1	1.11	B	*	mg/L	0.5	2.5	05/11/17 21:48	krh
Fluoride	SM4500F-C	1	0.22	B	*	mg/L	0.05	0.3	05/09/17 12:16	emk
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	05/19/17 0:00	calc
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.48			mg/L	0.02	0.1	05/19/17 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.48			mg/L	0.02	0.1	05/02/17 15:57	bce
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/02/17 15:57	bce
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1		U	*	mg/L	0.05	0.2	05/11/17 13:10	bce
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		0.2	B		mg/L	0.1	0.5	05/19/17 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	0.2	B	*	mg/L	0.1	0.5	05/10/17 22:34	pjb
pH (lab)	SM4500H+ B									
pH		1	7.4	H		units	0.1	0.1	05/05/17 0:00	abd
pH measured at		1	23.0			C	0.1	0.1	05/05/17 0:00	abd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.09		*	mg/L	0.02	0.05	05/11/17 22:59	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	164		*	mg/L	10	20	05/03/17 10:16	keh
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/02/17 16:17	els
Sulfate	M300.0 - Ion Chromatography	1	57.1		*	mg/L	0.5	2.5	05/11/17 21:48	krh
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/08/17 14:36	abd

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-9360-B

ACZ Sample ID: **L36878-03**

Date Sampled: 05/01/17 11:05

Date Received: 05/02/17

Sample Matrix: *Surface Water*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/08/17 15:50	spl
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/10/17 12:44	krh
Total Recoverable Digestion	M200.2 ICP-MS								05/03/17 14:01	enb
Total Recoverable Digestion	M200.2 ICP								05/04/17 7:42	gss

Rio Grande Silver, Inc.

Project ID: BO37296
Sample ID: WG-9360-B

ACZ Sample ID: **L36878-03**

Date Sampled: 05/01/17 11:05

Date Received: 05/02/17

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.41		*	mg/L	0.03	0.2	05/05/17 13:47	gss
Aluminum, total recoverable	M200.7 ICP	1	3.30			mg/L	0.03	0.2	05/04/17 18:20	gss
Arsenic, dissolved	M200.8 ICP-MS	1	0.0272			mg/L	0.0002	0.001	05/04/17 21:13	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0398			mg/L	0.0002	0.001	05/03/17 20:55	enb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 13:47	gss
Boron, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 12:39	gss
Cadmium, dissolved	M200.8 ICP-MS	1	0.0109			mg/L	0.0001	0.0005	05/04/17 21:13	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.0117			mg/L	0.0001	0.0005	05/03/17 20:55	enb
Calcium, dissolved	M200.7 ICP	1	17.5			mg/L	0.1	0.5	05/05/17 13:47	gss
Chromium, total recoverable	M200.8 ICP-MS	1	0.0011	B		mg/L	0.0005	0.002	05/03/17 20:55	enb
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/09/17 11:28	aeh
Cobalt, total recoverable	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	05/04/17 18:20	gss
Copper, dissolved	M200.8 ICP-MS	1	0.0144			mg/L	0.0005	0.003	05/04/17 21:13	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.019			mg/L	0.0005	0.003	05/03/17 20:55	enb
Iron, dissolved	M200.7 ICP	1	0.33			mg/L	0.02	0.05	05/05/17 13:47	gss
Iron, total recoverable	M200.7 ICP	1	1.76			mg/L	0.02	0.05	05/04/17 18:20	gss
Lead, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	05/04/17 21:13	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.0017			mg/L	0.0001	0.0005	05/03/17 20:55	enb
Magnesium, dissolved	M200.7 ICP	1	2.1			mg/L	0.2	1	05/05/17 13:47	gss
Manganese, dissolved	M200.7 ICP	1	0.275			mg/L	0.005	0.03	05/05/17 13:47	gss
Manganese, total recoverable	M200.7 ICP	1	0.304			mg/L	0.005	0.03	05/04/17 18:20	gss
Mercury, total	M1631, Atomic Fluorescence	1	9.0			ng/L	0.2	0.5	05/09/17 10:11	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	05/05/17 13:47	gss
Nickel, total recoverable	M200.7 ICP	1		U		mg/L	0.008	0.04	05/04/17 18:20	gss
Potassium, dissolved	M200.7 ICP	1	1.8			mg/L	0.2	1	05/05/17 13:47	gss
Selenium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0003	05/04/17 21:13	mfm
Selenium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0003	05/03/17 20:55	enb
Silica, dissolved	M200.7 ICP	1	26.1			mg/L	0.2	1	05/05/17 13:47	gss
Silica, total recoverable	M200.7 ICP	1	33.5		*	mg/L	0.2	1	05/05/17 12:39	gss
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/04/17 21:13	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.00008	B		mg/L	0.00005	0.0003	05/03/17 20:55	enb
Sodium, dissolved	M200.7 ICP	1	3.2			mg/L	0.2	1	05/05/17 13:47	gss
Uranium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	05/04/17 21:13	mfm
Uranium, total recoverable	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	05/03/17 20:55	enb
Zinc, dissolved	M200.8 ICP-MS	1	1.37			mg/L	0.002	0.005	05/04/17 21:13	mfm

Rio Grande Silver, Inc.

Project ID: BO37296
Sample ID: WG-9360-B

ACZ Sample ID: **L36878-03**
Date Sampled: 05/01/17 11:05
Date Received: 05/02/17
Sample Matrix: Surface Water

Zinc, total recoverable	M200.8 ICP-MS	1	1.42	*		mg/L	0.002	0.005	05/03/17 20:55	enb
Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	14.5	B		mg/L	2	20	05/05/17 0:00	abd
Carbonate as CaCO3		1		U		mg/L	2	20	05/05/17 0:00	abd
Hydroxide as CaCO3		1		U		mg/L	2	20	05/05/17 0:00	abd
Total Alkalinity		1	14.5	B		mg/L	2	20	05/05/17 0:00	abd
Carbon, dissolved organic (DOC)	SM5310B	1	5.2		*	mg/L	1	5	05/15/17 15:39	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			3.7			%			05/19/17 0:00	calc
Sum of Anions			1.3			meq/L			05/19/17 0:00	calc
Sum of Cations			1.4			meq/L			05/19/17 0:00	calc
Chemical Oxygen Demand	M410.4	1	15	B	*	mg/L	10	20	05/04/17 12:47	emk
Chloride	M300.0 - Ion Chromatography	1	1.04	B	*	mg/L	0.5	2.5	05/11/17 22:06	krh
Fluoride	SM4500F-C	1	0.25	B	*	mg/L	0.05	0.3	05/09/17 12:27	emk
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		52			mg/L	0.2	5	05/19/17 0:00	calc
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.29			mg/L	0.02	0.1	05/19/17 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.29			mg/L	0.02	0.1	05/02/17 16:01	bce
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/02/17 16:01	bce
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1		U	*	mg/L	0.05	0.2	05/11/17 13:16	bce
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH3		0.2	B		mg/L	0.1	0.5	05/19/17 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	0.2	B	*	mg/L	0.1	0.5	05/10/17 22:35	pjb
pH (lab)	SM4500H+ B									
pH		1	7.4	H		units	0.1	0.1	05/05/17 0:00	abd
pH measured at		1	22.8			C	0.1	0.1	05/05/17 0:00	abd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.13		*	mg/L	0.02	0.05	05/11/17 23:00	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	150		*	mg/L	10	20	05/03/17 10:19	keh
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/02/17 16:20	els
Sulfate	M300.0 - Ion Chromatography	1	45.5		*	mg/L	0.5	2.5	05/11/17 22:06	krh
Sulfide as S	SM4500S2-D	1	0.02	B	*	mg/L	0.02	0.1	05/08/17 14:40	abd

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-9700-W

ACZ Sample ID: **L36878-04**

Date Sampled: 05/01/17 11:45

Date Received: 05/02/17

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/08/17 16:00	spl
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/10/17 12:51	krh
Total Recoverable Digestion	M200.2 ICP-MS								05/03/17 14:33	enb
Total Recoverable Digestion	M200.2 ICP								05/04/17 8:43	gss

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-9700-W

ACZ Sample ID: **L36878-04**

Date Sampled: 05/01/17 11:45

Date Received: 05/02/17

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.49		*	mg/L	0.03	0.2	05/05/17 13:50	gss
Aluminum, total recoverable	M200.7 ICP	1	3.99			mg/L	0.03	0.2	05/04/17 18:23	gss
Arsenic, dissolved	M200.8 ICP-MS	1	0.032			mg/L	0.0002	0.001	05/04/17 21:16	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0461			mg/L	0.0002	0.001	05/03/17 21:04	enb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 13:50	gss
Boron, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 12:43	gss
Cadmium, dissolved	M200.8 ICP-MS	1	0.0024			mg/L	0.0001	0.0005	05/04/17 21:16	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.0028			mg/L	0.0001	0.0005	05/03/17 21:04	enb
Calcium, dissolved	M200.7 ICP	1	8.9			mg/L	0.1	0.5	05/05/17 13:50	gss
Chromium, total recoverable	M200.8 ICP-MS	1	0.0013	B		mg/L	0.0005	0.002	05/03/17 21:04	enb
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/09/17 11:31	aeh
Cobalt, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/04/17 18:23	gss
Copper, dissolved	M200.8 ICP-MS	1	0.0187			mg/L	0.0005	0.003	05/04/17 21:16	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.0248			mg/L	0.0005	0.003	05/03/17 21:04	enb
Iron, dissolved	M200.7 ICP	1	0.46			mg/L	0.02	0.05	05/05/17 13:50	gss
Iron, total recoverable	M200.7 ICP	1	2.24			mg/L	0.02	0.05	05/04/17 18:23	gss
Lead, dissolved	M200.8 ICP-MS	1	0.0007			mg/L	0.0001	0.0005	05/04/17 21:16	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.0019			mg/L	0.0001	0.0005	05/03/17 21:04	enb
Magnesium, dissolved	M200.7 ICP	1	1.2			mg/L	0.2	1	05/05/17 13:50	gss
Manganese, dissolved	M200.7 ICP	1	0.159			mg/L	0.005	0.03	05/05/17 13:50	gss
Manganese, total recoverable	M200.7 ICP	1	0.187			mg/L	0.005	0.03	05/04/17 18:23	gss
Mercury, total	M1631, Atomic Fluorescence	1	9.3			ng/L	0.2	0.5	05/09/17 10:16	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	05/05/17 13:50	gss
Nickel, total recoverable	M200.7 ICP	1		U		mg/L	0.008	0.04	05/04/17 18:23	gss
Potassium, dissolved	M200.7 ICP	1	1.5			mg/L	0.2	1	05/05/17 13:50	gss
Selenium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0003	05/04/17 21:16	mfm
Selenium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0003	05/03/17 21:04	enb
Silica, dissolved	M200.7 ICP	1	25.4			mg/L	0.2	1	05/05/17 13:50	gss
Silica, total recoverable	M200.7 ICP	1	27.3		*	mg/L	0.2	1	05/05/17 12:43	gss
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/04/17 21:16	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.00006	B		mg/L	0.00005	0.0003	05/03/17 21:04	enb
Sodium, dissolved	M200.7 ICP	1	2.7			mg/L	0.2	1	05/05/17 13:50	gss
Uranium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	05/04/17 21:16	mfm
Uranium, total recoverable	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	05/03/17 21:04	enb
Zinc, dissolved	M200.8 ICP-MS	1	0.219			mg/L	0.002	0.005	05/04/17 21:16	mfm

Rio Grande Silver, Inc.

Project ID: BO37296
Sample ID: WG-9700-W

ACZ Sample ID: **L36878-04**
Date Sampled: 05/01/17 11:45
Date Received: 05/02/17
Sample Matrix: Surface Water

Zinc, total recoverable	M200.8 ICP-MS	1	0.241	*		mg/L	0.002	0.005	05/03/17 21:04	enb
Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	17.4	B		mg/L	2	20	05/05/17 0:00	abd
Carbonate as CaCO3		1		U		mg/L	2	20	05/05/17 0:00	abd
Hydroxide as CaCO3		1		U		mg/L	2	20	05/05/17 0:00	abd
Total Alkalinity		1	17.4	B		mg/L	2	20	05/05/17 0:00	abd
Carbon, dissolved organic (DOC)	SM5310B	1	6.0		*	mg/L	1	5	05/15/17 15:39	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			7.8			%			05/19/17 0:00	calc
Sum of Anions			0.683			meq/L			05/19/17 0:00	calc
Sum of Cations			0.799			meq/L			05/19/17 0:00	calc
Chemical Oxygen Demand	M410.4	1	13	B	*	mg/L	10	20	05/04/17 12:57	emk
Chloride	M300.0 - Ion Chromatography	1	0.97	B	*	mg/L	0.5	2.5	05/11/17 23:00	krh
Fluoride	SM4500F-C	1	0.15	B	*	mg/L	0.05	0.3	05/09/17 12:52	emk
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		27			mg/L	0.2	5	05/19/17 0:00	calc
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	05/19/17 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14			mg/L	0.02	0.1	05/02/17 16:12	bce
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/02/17 16:12	bce
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1		U	*	mg/L	0.05	0.2	05/11/17 13:17	bce
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH3		0.2	B		mg/L	0.1	0.5	05/19/17 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	0.2	B	*	mg/L	0.1	0.5	05/10/17 22:36	pjb
pH (lab)	SM4500H+ B									
pH		1	7.6	H		units	0.1	0.1	05/05/17 0:00	abd
pH measured at		1	22.7			C	0.1	0.1	05/05/17 0:00	abd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.16		*	mg/L	0.02	0.05	05/11/17 23:01	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	114		*	mg/L	10	20	05/03/17 10:21	keh
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U		mg/L	5	20	05/05/17 10:25	keh
Sulfate	M300.0 - Ion Chromatography	1	13.8		*	mg/L	0.5	2.5	05/11/17 23:00	krh
Sulfide as S	SM4500S2-D	1	0.02	B	*	mg/L	0.02	0.1	05/08/17 14:43	abd

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-U

ACZ Sample ID: **L36878-05**

Date Sampled: 05/01/17 12:20

Date Received: 05/02/17

Sample Matrix: *Surface Water*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/08/17 16:20	spl
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/10/17 12:57	krh
Total Recoverable Digestion	M200.2 ICP-MS								05/03/17 14:44	enb
Total Recoverable Digestion	M200.2 ICP								05/04/17 9:45	gss

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-U

ACZ Sample ID: **L36878-05**

Date Sampled: 05/01/17 12:20

Date Received: 05/02/17

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.32		*	mg/L	0.03	0.2	05/05/17 13:53	gss
Aluminum, total recoverable	M200.7 ICP	1	4.61			mg/L	0.03	0.2	05/04/17 18:26	gss
Arsenic, dissolved	M200.8 ICP-MS	1	0.0022			mg/L	0.0002	0.001	05/04/17 21:19	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0029			mg/L	0.0002	0.001	05/03/17 21:07	enb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 13:53	gss
Boron, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/05/17 12:46	gss
Cadmium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/04/17 21:19	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/03/17 21:07	enb
Calcium, dissolved	M200.7 ICP	1	7.2			mg/L	0.1	0.5	05/05/17 13:53	gss
Chromium, total recoverable	M200.8 ICP-MS	1	0.0016	B		mg/L	0.0005	0.002	05/03/17 21:07	enb
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/09/17 11:34	aeh
Cobalt, total recoverable	M200.7 ICP	1		U		mg/L	0.01	0.05	05/04/17 18:26	gss
Copper, dissolved	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0005	0.003	05/04/17 21:19	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.0019	B		mg/L	0.0005	0.003	05/03/17 21:07	enb
Iron, dissolved	M200.7 ICP	1	0.24			mg/L	0.02	0.05	05/05/17 13:53	gss
Iron, total recoverable	M200.7 ICP	1	2.22			mg/L	0.02	0.05	05/04/17 18:26	gss
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0001	0.0005	05/04/17 21:19	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.0009			mg/L	0.0001	0.0005	05/03/17 21:07	enb
Magnesium, dissolved	M200.7 ICP	1	0.9	B		mg/L	0.2	1	05/05/17 13:53	gss
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	05/05/17 13:53	gss
Manganese, total recoverable	M200.7 ICP	1	0.026	B		mg/L	0.005	0.03	05/04/17 18:26	gss
Mercury, total	M1631, Atomic Fluorescence	1	5.3			ng/L	0.2	0.5	05/09/17 10:21	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	05/05/17 13:53	gss
Nickel, total recoverable	M200.7 ICP	1		U		mg/L	0.008	0.04	05/04/17 18:26	gss
Potassium, dissolved	M200.7 ICP	1	1.3			mg/L	0.2	1	05/05/17 13:53	gss
Selenium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0003	05/04/17 21:19	mfm
Selenium, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0003	05/03/17 21:07	enb
Silica, dissolved	M200.7 ICP	1	27.5			mg/L	0.2	1	05/05/17 13:53	gss
Silica, total recoverable	M200.7 ICP	1	33.0		*	mg/L	0.2	1	05/05/17 12:46	gss
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/04/17 21:19	mfm
Silver, total recoverable	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/03/17 21:07	enb
Sodium, dissolved	M200.7 ICP	1	2.8			mg/L	0.2	1	05/05/17 13:53	gss
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/04/17 21:19	mfm
Uranium, total recoverable	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	05/03/17 21:07	enb
Zinc, dissolved	M200.8 ICP-MS	1		U		mg/L	0.002	0.005	05/04/17 21:19	mfm

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-U

ACZ Sample ID: **L36878-05**

Date Sampled: 05/01/17 12:20

Date Received: 05/02/17

Sample Matrix: Surface Water

Zinc, total recoverable	M200.8 ICP-MS	1	0.012		*	mg/L	0.002	0.005	05/03/17 21:07	enb
Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	24.0			mg/L	2	20	05/05/17 0:00	abd
Carbonate as CaCO3		1		U		mg/L	2	20	05/05/17 0:00	abd
Hydroxide as CaCO3		1		U		mg/L	2	20	05/05/17 0:00	abd
Total Alkalinity		1	24.0			mg/L	2	20	05/05/17 0:00	abd
Carbon, dissolved organic (DOC)	SM5310B	1	7.5		*	mg/L	1	5	05/15/17 15:39	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			5.2			%			05/19/17 0:00	calc
Sum of Anions			0.576			meq/L			05/19/17 0:00	calc
Sum of Cations			0.639			meq/L			05/19/17 0:00	calc
Chemical Oxygen Demand	M410.4	1	17	B	*	mg/L	10	20	05/04/17 13:07	emk
Chloride	M300.0 - Ion Chromatography	1	0.90	B	*	mg/L	0.5	2.5	05/11/17 23:18	krh
Fluoride	SM4500F-C	1	0.10	B	*	mg/L	0.05	0.3	05/09/17 12:56	emk
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		22			mg/L	0.2	5	05/19/17 0:00	calc
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2			U		mg/L	0.02	0.1	05/19/17 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U		mg/L	0.02	0.1	05/02/17 16:13	bce
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/02/17 16:13	bce
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1		U	*	mg/L	0.05	0.2	05/11/17 13:19	bce
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH3		0.4	B		mg/L	0.1	0.5	05/19/17 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	0.4	B	*	mg/L	0.1	0.5	05/10/17 22:38	pjb
pH (lab)	SM4500H+ B									
pH		1	7.7	H		units	0.1	0.1	05/05/17 0:00	abd
pH measured at		1	22.7			C	0.1	0.1	05/05/17 0:00	abd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.11		*	mg/L	0.02	0.05	05/11/17 23:03	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	112			mg/L	10	20	05/03/17 15:30	keh
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U		mg/L	5	20	05/05/17 10:27	keh
Sulfate	M300.0 - Ion Chromatography	1	3.14		*	mg/L	0.5	2.5	05/11/17 23:18	krh
Sulfide as S	SM4500S2-D	1	0.02	B	*	mg/L	0.02	0.1	05/08/17 14:46	abd

Rio Grande Silver, Inc.

Project ID: BO37296
Sample ID: TRIP BLANK

ACZ Sample ID: **L36878-06**
Date Sampled: 05/01/17 10:30
Date Received: 05/02/17
Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Mercury, total	M1631, Atomic Fluorescence	1		U		ng/L	0.2	0.5	05/09/17 10:26	mfm


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>

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422295													
WG422295PBW1	PBW	05/04/17 15:17				2.8	mg/L		-20	20			
WG422295LCSW3	LCSW	05/04/17 15:34	WC170502-8	820.0001		797	mg/L	97	90	110			
WG422295LCSW6	LCSW	05/04/17 19:43	WC170502-8	820.0001		795	mg/L	97	90	110			
WG422295PBW2	PBW	05/04/17 19:50				U	mg/L		-20	20			
WG422295LCSW9	LCSW	05/04/17 23:26	WC170502-8	820.0001		813	mg/L	99	90	110			
WG422295PBW3	PBW	05/04/17 23:34				U	mg/L		-20	20			
L36888-01DUP	DUP	05/05/17 2:26			65.2	66	mg/L				1	20	
WG422295LCSW12	LCSW	05/05/17 2:43	WC170502-8	820.0001		813	mg/L	99	90	110			
WG422295PBW4	PBW	05/05/17 2:52				5.8	mg/L		-20	20			
WG422295LCSW15	LCSW	05/05/17 6:13	WC170502-8	820.0001		818	mg/L	100	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	2		1.986	mg/L	99	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.09	0.09			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	.150195		.128	mg/L	85	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	200.410195		201.2	mg/L	100	1	200			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	1.0013		.98	mg/L	98	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	1.0013	.3	1.579	mg/L	128	85	115			M1
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	1.0013	.3	1.821	mg/L	152	85	115	14	20	M1
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	1		.995	mg/L	100	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.09	0.09			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	1		.988	mg/L	99	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.09	0.09			

Aluminum, total recoverable M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422297													
WG422297ICV	ICV	05/04/17 16:41	II170426-1	2		2.057	mg/L	103	95	105			
WG422297ICB	ICB	05/04/17 16:47				U	mg/L		-0.09	0.09			
WG422297PQV	PQV	05/04/17 16:50	II170424-4	.150195		.183	mg/L	122	70	130			
WG422297SIC	SIC	05/04/17 16:53	II170424-2	200.410195		205.2	mg/L	102	1	200			
WG422171LRB	LRB	05/04/17 16:59				.03	mg/L		-0.066	0.066			
WG422171LFB	LFB	05/04/17 17:02	II170417-4	1.0013		1.023	mg/L	102	85	115			
WG422297CCV1	CCV	05/04/17 17:29	II170428-1	1		1.069	mg/L	107	90	110			
WG422297CCB1	CCB	05/04/17 17:32				U	mg/L		-0.09	0.09			
L36845-09LFM	LFM	05/04/17 17:53	II170417-4	1.0013	.27	1.329	mg/L	106	70	130			
L36845-09LFMD	LFMD	05/04/17 17:56	II170417-4	1.0013	.27	1.313	mg/L	104	70	130	1	20	
WG422297CCV2	CCV	05/04/17 18:05	II170428-1	1		1.025	mg/L	103	90	110			
WG422297CCB2	CCB	05/04/17 18:08				U	mg/L		-0.09	0.09			
WG422297CCV3	CCV	05/04/17 18:29	II170428-1	1		1.051	mg/L	105	90	110			
WG422297CCB3	CCB	05/04/17 18:32				U	mg/L		-0.09	0.09			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.05056	mg/L	101	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.0006	0.0006			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.0501		.04476	mg/L	89	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.1002		.09889	mg/L	99	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.0006	0.0006			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.0501	.0225	.07414	mg/L	103	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.1002		.09908	mg/L	99	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.0006	0.0006			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.0501	.0225	.07046	mg/L	96	70	130	5	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.1002		.09975	mg/L	100	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.0006	0.0006			

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05006	mg/L	100	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0006	0.0006			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.00044	0.00044			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.0501		.04802	mg/L	96	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.1002		.1011	mg/L	101	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.0006	0.0006			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.1002		.09963	mg/L	99	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.0006	0.0006			
L36878-03LFB	LFB	05/03/17 20:58	MS170321-3	.0501	.0398	.08857	mg/L	97	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.0501	.0398	.08923	mg/L	99	70	130	1	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.1002		.0993	mg/L	99	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.0006	0.0006			

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	2		1.941	mg/L	97	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.03	0.03			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	.05005		.048	mg/L	96	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	.1001		.099	mg/L	99	80	120			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	.5005		.477	mg/L	95	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	.5005	U	.487	mg/L	97	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	.5005	U	.479	mg/L	96	85	115	2	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	1		.973	mg/L	97	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.03	0.03			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	1		.985	mg/L	99	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.03	0.03			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Boron, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422344													
WG422344ICV	ICV	05/05/17 11:40	II170426-1	2		1.967	mg/L	98	95	105			
WG422344ICB	ICB	05/05/17 11:46				U	mg/L		-0.03	0.03			
WG422344PQV	PQV	05/05/17 11:49	II170424-4	.05005		.048	mg/L	96	70	130			
WG422344SIC	SIC	05/05/17 11:52	II170424-2	.1001		.087	mg/L	87	80	120			
WG422171LRB	LRB	05/05/17 11:58				U	mg/L		-0.022	0.022			
WG422171LFB	LFB	05/05/17 12:02	II170417-4	.5005		.499	mg/L	100	85	115			
L36845-09LFM	LFM	05/05/17 12:20	II170417-4	.5005	U	.505	mg/L	101	70	130			
L36845-09LFMD	LFMD	05/05/17 12:24	II170417-4	.5005	U	.512	mg/L	102	70	130	1	20	
WG422344CCV1	CCV	05/05/17 12:30	II170428-1	1		.98	mg/L	98	90	110			
WG422344CCB1	CCB	05/05/17 12:33				U	mg/L		-0.03	0.03			
WG422344CCV2	CCV	05/05/17 12:49	II170428-1	1		.963	mg/L	96	90	110			
WG422344CCB2	CCB	05/05/17 12:52				U	mg/L		-0.03	0.03			

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.05146	mg/L	103	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.0003	0.0003			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.05005		.04676	mg/L	93	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.1001		.09649	mg/L	96	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.0003	0.0003			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.05005	.0057	.05445	mg/L	97	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.1001		.09603	mg/L	96	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.0003	0.0003			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.05005	.0057	.05186	mg/L	92	70	130	5	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.1001		.0974	mg/L	97	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.0003	0.0003			

Cadmium, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05088	mg/L	102	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0003	0.0003			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.00022	0.00022			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.05005		.04791	mg/L	96	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.1001		.09603	mg/L	96	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.0003	0.0003			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.1001		.09669	mg/L	97	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.0003	0.0003			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.05005	.0117	.0588	mg/L	94	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.05005	.0117	.05906	mg/L	95	70	130	0	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.1001		.09595	mg/L	96	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.0003	0.0003			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	100		98.96	mg/L	99	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.3	0.3			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	.5009		.44	mg/L	88	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	200.8609		199.5	mg/L	99	1	200			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	68.01207		67.39	mg/L	99	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	68.01207	21.6	88.1	mg/L	98	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	68.01207	21.6	87.28	mg/L	97	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	50		50.09	mg/L	100	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.3	0.3			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	50		50.11	mg/L	100	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.3	0.3			

Carbon, dissolved organic (DOC)

SM5310B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422526													
WG422526CCV1	CCV	05/15/17 15:39	WI170407-5	50		47.6	mg/L	95	90	110			
WG422526CCB1	CCB	05/15/17 15:39				U	mg/L		-3	3			
WG422526PQV	PQV	05/15/17 15:39	WI170407-6	5		4.7	mg/L	94	70	130			
WG422526LFB	LFB	05/15/17 15:39	WI170131-1	50		49.4	mg/L	99	90	110			
WG422526CCV2	CCV	05/15/17 15:39	WI170407-5	50		48	mg/L	96	90	110			
WG422526CCB2	CCB	05/15/17 15:39				U	mg/L		-3	3			
L36860-10DUP	DUP	05/15/17 15:39			U	U	mg/L				0	20	RA
L36860-11AS	AS	05/15/17 15:39	WI170131-1	50	17.1	65.7	mg/L	97	90	110			
WG422526CCV3	CCV	05/15/17 15:39	WI170407-5	50		47.2	mg/L	94	90	110			
WG422526CCB3	CCB	05/15/17 15:39				U	mg/L		-3	3			
WG422526CCV4	CCV	05/15/17 15:39	WI170407-5	50		46.8	mg/L	94	90	110			
WG422526CCB4	CCB	05/15/17 15:39				U	mg/L		-3	3			

Chemical Oxygen Demand

M410.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422272													
WG422272ICV	ICV	05/04/17 9:15	WC161013-8	200		201	mg/L	101	90	110			
WG422272ICB	ICB	05/04/17 9:25				U	mg/L		-10	10			
WG422272LRB	LRB	05/04/17 9:35				U	mg/L		-10	10			
WG422272LFB	LFB	05/04/17 9:45	WC161013-7	50		46	mg/L	92	90	110			
WG422272CCV1	CCV	05/04/17 11:16	WC161013-6	400		400	mg/L	100	90	110			
WG422272CCB1	CCB	05/04/17 11:26				U	mg/L		-10	10			
WG422272CCV2	CCV	05/04/17 13:17	WC161013-6	400		400	mg/L	100	90	110			
WG422272CCB2	CCB	05/04/17 13:27				U	mg/L		-10	10			
L36878-05DUP	DUP	05/04/17 13:37			17	19	mg/L				11	20	RA
L36878-05AS	AS	05/04/17 13:47	WC161013-7	50	17	68	mg/L	102	90	110			
WG422272CCV3	CCV	05/04/17 13:57	WC161013-6	400		400	mg/L	100	90	110			
WG422272CCB3	CCB	05/04/17 14:07				U	mg/L		-10	10			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Chloride

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422675													
WG422675ICV	ICV	05/10/17 14:38	WI170426-1	20.02		20	mg/L	100	90	110			
WG422675ICB	ICB	05/10/17 14:56				U	mg/L		-0.5	0.5			
WG422675CCV1	CCV	05/11/17 15:14	WI170510-1	50		49	mg/L	98	90	110			
WG422675CCB1	CCB	05/11/17 15:32				U	mg/L		-0.5	0.5			
WG422675PQV	PQV	05/11/17 15:49	WI170418-1	2.5025		2.59	mg/L	103	70	130			
WG422675LFB	LFB	05/11/17 16:07	WI170304-2	30		30.3	mg/L	101	90	110			
WG422675CCV2	CCV	05/11/17 18:49	WI170510-1	50		48.8	mg/L	98	90	110			
WG422675CCB2	CCB	05/11/17 19:07				U	mg/L		-0.5	0.5			
L36860-11DUP	DUP	05/11/17 20:54			1.34	1.33	mg/L				1	20	RA
L36878-01AS	AS	05/11/17 21:30	WI170304-2	30	1.09	31.2	mg/L	100	90	110			
WG422675CCV3	CCV	05/11/17 22:24	WI170510-1	50		49	mg/L	98	90	110			
WG422675CCB3	CCB	05/11/17 22:42				U	mg/L		-0.5	0.5			
WG422675CCV4	CCV	05/12/17 0:47	WI170510-1	50		49.2	mg/L	98	90	110			
WG422675CCB4	CCB	05/12/17 1:05				U	mg/L		-0.5	0.5			
WG422675CCV5	CCV	05/12/17 11:26	WI170510-1	50		49.7	mg/L	99	90	110			
WG422675CCB5	CCB	05/12/17 11:44				U	mg/L		-0.5	0.5			
WG422675PQV1	PQV	05/12/17 12:02	WI170418-1	2.5025		2.6	mg/L	104	70	130			
WG422675CCV6	CCV	05/12/17 13:13	WI170510-1	50		49.5	mg/L	99	90	110			
WG422675CCB6	CCB	05/12/17 13:31				U	mg/L		-0.5	0.5			

Chromium, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05101	mg/L	102	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0015	0.0015			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.0011	0.0011			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.05		.04804	mg/L	96	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.1		.1008	mg/L	101	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.0015	0.0015			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.1		.09885	mg/L	99	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.0015	0.0015			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.05	.0011	.04909	mg/L	96	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.05	.0011	.04975	mg/L	97	70	130	1	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.1		.09854	mg/L	99	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.0015	0.0015			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422371													
WG422371ICV	ICV	05/09/17 10:55	II170426-1	2.002		1.907	mg/L	95	95	105			
WG422371ICB	ICB	05/09/17 11:01				U	mg/L		-0.03	0.03			
WG422371PQV	PQV	05/09/17 11:04	II170424-4	.05025		.05	mg/L	100	70	130			
WG422371SIC	SIC	05/09/17 11:07	II170424-2	.1005		.101	mg/L	100	80	120			
WG422371LFB	LFB	05/09/17 11:13	II170417-4	.5025		.493	mg/L	98	85	115			
L36878-02AS	AS	05/09/17 11:22	II170417-4	.5025	U	.503	mg/L	100	85	115			
L36878-02ASD	ASD	05/09/17 11:25	II170417-4	.5025	U	.502	mg/L	100	85	115	0	20	
WG422371CCV1	CCV	05/09/17 11:43	II170428-1	1.001		.958	mg/L	96		110			
WG422371CCB1	CCB	05/09/17 11:46				U	mg/L		-0.03	0.03			
WG422371CCV2	CCV	05/09/17 11:52	II170428-1	1.001		.953	mg/L	95	90	110			
WG422371CCB2	CCB	05/09/17 11:55				U	mg/L		-0.03	0.03			

Cobalt, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422297													
WG422297ICV	ICV	05/04/17 16:41	II170426-1	2.002		1.904	mg/L	95	95	105			
WG422297ICB	ICB	05/04/17 16:47				U	mg/L		-0.03	0.03			
WG422297PQV	PQV	05/04/17 16:50	II170424-4	.05025		.059	mg/L	117	70	130			
WG422297SIC	SIC	05/04/17 16:53	II170424-2	.1005		.108	mg/L	107	80	120			
WG422171LRB	LRB	05/04/17 16:59				U	mg/L		-0.022	0.022			
WG422171LFB	LFB	05/04/17 17:02	II170417-4	.5025		.495	mg/L	99	85	115			
WG422297CCV1	CCV	05/04/17 17:29	II170428-1	1.001		.954	mg/L	95	90	110			
WG422297CCB1	CCB	05/04/17 17:32				U	mg/L		-0.03	0.03			
L36845-09LFM	LFM	05/04/17 17:53	II170417-4	.5025	U	.514	mg/L	102	70	130			
L36845-09LFMD	LFMD	05/04/17 17:56	II170417-4	.5025	U	.505	mg/L	100	70	130	2	20	
WG422297CCV2	CCV	05/04/17 18:05	II170428-1	1.001		.942	mg/L	94	90	110			
WG422297CCB2	CCB	05/04/17 18:08				U	mg/L		-0.03	0.03			
WG422297CCV3	CCV	05/04/17 18:29	II170428-1	1.001		.961	mg/L	96	90	110			
WG422297CCB3	CCB	05/04/17 18:32				U	mg/L		-0.03	0.03			

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.05064	mg/L	101	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.0015	0.0015			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.05005		.0439	mg/L	88	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.25025		.2465	mg/L	99	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.0015	0.0015			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.05005	.0061	.05446	mg/L	97	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.25025		.2473	mg/L	99	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.0015	0.0015			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.05005	.0061	.05185	mg/L	91	70	130	5	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.25025		.2489	mg/L	99	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.0015	0.0015			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Copper, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05122	mg/L	102	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0015	0.0015			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.0011	0.0011			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.05005		.04879	mg/L	97	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.25025		.263	mg/L	105	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.0015	0.0015			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.25025		.2538	mg/L	101	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.0015	0.0015			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.05005	.019	.06784	mg/L	98	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.05005	.019	.06827	mg/L	98	70	130	1	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.25025		.2532	mg/L	101	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.0015	0.0015			

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422493													
WG422493ICV	ICV	05/09/17 10:10	WC170424-15	2.006		1.982	mg/L	99	95	105			
WG422493ICB	ICB	05/09/17 10:14				.096	mg/L		-0.15	0.15			
WG422493PQV	PQV	05/09/17 10:18	WC170509-1	.24975		.279	mg/L	112	70	130			
WG422493LFB1	LFB	05/09/17 10:21	WC170320-7	4.995		4.738	mg/L	95	90	110			
WG422493CCV1	CCV	05/09/17 11:03	WC170424-15	2.006		1.982	mg/L	99	90	110			
WG422493CCB1	CCB	05/09/17 11:10				U	mg/L		-0.15	0.15			
L36848-02AS	AS	05/09/17 11:27	WC170320-7	4.995	.21	4.803	mg/L	92	90	110			
L36848-02DUP	DUP	05/09/17 11:35			.21	.232	mg/L				10	20	RA
WG422493CCV2	CCV	05/09/17 11:51	WC170424-15	2.006		1.965	mg/L	98	90	110			
WG422493CCB2	CCB	05/09/17 11:59				U	mg/L		-0.15	0.15			
WG422493LFB2	LFB	05/09/17 12:19	WC170320-7	4.995		4.697	mg/L	94	90	110			
L36878-03AS	AS	05/09/17 12:35	WC170320-7	4.995	.25	4.717	mg/L	89	90	110			M2
L36878-03DUP	DUP	05/09/17 12:38			.25	.317	mg/L				24	20	RA
WG422493CCV3	CCV	05/09/17 12:41	WC170424-15	2.006		1.93	mg/L	96	90	110			
WG422493CCB3	CCB	05/09/17 12:48				U	mg/L		-0.15	0.15			
WG422493CCV4	CCV	05/09/17 13:27	WC170424-15	2.006		1.965	mg/L	98	90	110			
WG422493CCB4	CCB	05/09/17 13:35				U	mg/L		-0.15	0.15			
WG422493CCV5	CCV	05/09/17 14:15	WC170424-15	2.006		1.982	mg/L	99	90	110			
WG422493CCB5	CCB	05/09/17 14:23				U	mg/L		-0.15	0.15			
WG422493CCV6	CCV	05/09/17 14:34	WC170509-7	2.006		1.947	mg/L	97	90	110			
WG422493CCB6	CCB	05/09/17 14:42				U	mg/L		-0.15	0.15			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	2		1.934	mg/L	97	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.06	0.06			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	.050085		.042	mg/L	84	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	200.390085		187.5	mg/L	94	1	200			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	1.0017		.938	mg/L	94	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	1.0017	.24	1.276	mg/L	103	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	1.0017	.24	1.363	mg/L	112	85	115	7	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	1		.979	mg/L	98	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.06	0.06			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	1		.973	mg/L	97	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.06	0.06			

Iron, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422297													
WG422297ICV	ICV	05/04/17 16:41	II170426-1	2		1.962	mg/L	98	95	105			
WG422297ICB	ICB	05/04/17 16:47				U	mg/L		-0.06	0.06			
WG422297PQV	PQV	05/04/17 16:50	II170424-4	.050085		.056	mg/L	112	70	130			
WG422297SIC	SIC	05/04/17 16:53	II170424-2	200.390085		187.7	mg/L	94	1	200			
WG422171LRB	LRB	05/04/17 16:59				U	mg/L		-0.044	0.044			
WG422171LFB	LFB	05/04/17 17:02	II170417-4	1.0017		.983	mg/L	98	85	115			
WG422297CCV1	CCV	05/04/17 17:29	II170428-1	1		1.046	mg/L	105	90	110			
WG422297CCB1	CCB	05/04/17 17:32				U	mg/L		-0.06	0.06			
L36845-09LFM	LFM	05/04/17 17:53	II170417-4	1.0017	.05	1.032	mg/L	98	70	130			
L36845-09LFMD	LFMD	05/04/17 17:56	II170417-4	1.0017	.05	1.018	mg/L	97	70	130	1	20	
WG422297CCV2	CCV	05/04/17 18:05	II170428-1	1		.985	mg/L	99	90	110			
WG422297CCB2	CCB	05/04/17 18:08				U	mg/L		-0.06	0.06			
WG422297CCV3	CCV	05/04/17 18:29	II170428-1	1		.997	mg/L	100	90	110			
WG422297CCB3	CCB	05/04/17 18:32				U	mg/L		-0.06	0.06			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.05234	mg/L	105	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.0003	0.0003			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.0501		.04665	mg/L	93	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.2505		.2483	mg/L	99	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.0003	0.0003			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.0501	.0013	.04995	mg/L	97	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.2505		.2482	mg/L	99	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.0003	0.0003			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.0501	.0013	.04739	mg/L	92	70	130	5	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.2505		.25	mg/L	100	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.0003	0.0003			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Lead, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05238	mg/L	105	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0003	0.0003			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.00022	0.00022			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.0501		.04838	mg/L	97	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.2505		.2501	mg/L	100	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.0003	0.0003			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.2505		.2497	mg/L	100	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.0003	0.0003			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.0501	.0017	.05076	mg/L	98	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.0501	.0017	.05083	mg/L	98	70	130	0	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.2505		.2502	mg/L	100	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.0003	0.0003			

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	100		99.2	mg/L	99	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.6	0.6			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	1.0012		.93	mg/L	93	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	201.2412		201.3	mg/L	100	1	200			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	50.01344		45.83	mg/L	92	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	50.01344	2.4	48.45	mg/L	92	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	50.01344	2.4	48.08	mg/L	91	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	50		50.15	mg/L	100	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.6	0.6			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	50		49.95	mg/L	100	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.6	0.6			

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	2		1.902	mg/L	95	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.015	0.015			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	.025025		.0195	mg/L	78	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	50.025025		46.53	mg/L	93	1	200			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	.5		.4776	mg/L	96	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	.5	.008	.494	mg/L	97	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	.5	.008	.4876	mg/L	96	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	1		.9657	mg/L	97	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.015	0.015			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	1		.9655	mg/L	97	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.015	0.015			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Manganese, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422297													
WG422297ICV	ICV	05/04/17 16:41	II170426-1	2		1.9082	mg/L	95	95	105			
WG422297ICB	ICB	05/04/17 16:47				U	mg/L		-0.015	0.015			
WG422297PQV	PQV	05/04/17 16:50	II170424-4	.025025		.0285	mg/L	114	70	130			
WG422297SIC	SIC	05/04/17 16:53	II170424-2	50.025025		45.72	mg/L	91	1	200			
WG422171LRB	LRB	05/04/17 16:59				U	mg/L		-0.011	0.011			
WG422171LFB	LFB	05/04/17 17:02	II170417-4	.5		.5016	mg/L	100	85	115			
WG422297CCV1	CCV	05/04/17 17:29	II170428-1	1		.9848	mg/L	98	90	110			
WG422297CCB1	CCB	05/04/17 17:32				U	mg/L		-0.015	0.015			
L36845-09LFM	LFM	05/04/17 17:53	II170417-4	.5	.06	.568	mg/L	102	70	130			
L36845-09LFMD	LFMD	05/04/17 17:56	II170417-4	.5	.06	.562	mg/L	100	70	130	1	20	
WG422297CCV2	CCV	05/04/17 18:05	II170428-1	1		.9558	mg/L	96	90	110			
WG422297CCB2	CCB	05/04/17 18:08				U	mg/L		-0.015	0.015			
WG422297CCV3	CCV	05/04/17 18:29	II170428-1	1		.9683	mg/L	97	90	110			
WG422297CCB3	CCB	05/04/17 18:32				U	mg/L		-0.015	0.015			

Mercury, total

M1631, Atomic Fluorescence

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG421459													
WG421459ICV	ICV	04/21/17 12:27	HG170404-4	10		10.7	ng/L	107	79	121			
WG421459ICB	ICB	04/21/17 12:32				U	ng/L		-0.5	0.5			
WG422474													
WG422474CCV1	CCV	05/09/17 8:57	HG170404-4	10		9.63	ng/L	96	76.5	123.4			
WG422474CCB1	CCB	05/09/17 9:02				U	ng/L		-0.5	0.5			
WG422474PQV	PQV	05/09/17 9:07	HG170404-6	.5		.46	ng/L	92	70	130			
WG422474LFB	LFB	05/09/17 9:12	HG170404-5	2		1.73	ng/L	87	71	125			
L36860-09MS	MS	05/09/17 9:32	HG170404-5	2	5.7	7.42	ng/L	86	71	125			
L36860-09MSD	MSD	05/09/17 9:37	HG170404-5	2	5.7	7.43	ng/L	87	71	125	0	24	
WG422474CCV2	CCV	05/09/17 9:52	HG170404-4	10		9.44	ng/L	94	76.5	123.4			
WG422474CCB2	CCB	05/09/17 9:57				U	ng/L		-0.5	0.5			
WG422474CCV3	CCV	05/09/17 10:41	HG170404-4	10		8.75	ng/L	88	76.5	123.4			
WG422474CCB3	CCB	05/09/17 10:46				U	ng/L		-0.5	0.5			
L36899-01MS	MS	05/09/17 10:56	HG170404-5	2	2.2	4.14	ng/L	96	71	125			
L36899-01MSD	MSD	05/09/17 11:00	HG170404-5	2	2.2	4.07	ng/L	94	71	125	2	24	
WG422474CCV4	CCV	05/09/17 11:35	HG170404-4	10		9.18	ng/L	92	76.5	123.4			
WG422474CCB4	CCB	05/09/17 11:40				U	ng/L		-0.5	0.5			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	2.002		2.0275	mg/L	101	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.024	0.024			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	.03984		.0404	mg/L	101	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	.0996		.0946	mg/L	95	80	120			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	.498		.4911	mg/L	99	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	.498	U	.4885	mg/L	98	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	.498	U	.4847	mg/L	97	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	1.001		1.017	mg/L	102	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.024	0.024			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	1.001		1.024	mg/L	102	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.024	0.024			

Nickel, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422297													
WG422297ICV	ICV	05/04/17 16:41	II170426-1	2.002		2.0222	mg/L	101	95	105			
WG422297ICB	ICB	05/04/17 16:47				U	mg/L		-0.024	0.024			
WG422297PQV	PQV	05/04/17 16:50	II170424-4	.03984		.0408	mg/L	102	70	130			
WG422297SIC	SIC	05/04/17 16:53	II170424-2	.0996		.0953	mg/L	96	80	120			
WG422171LRB	LRB	05/04/17 16:59				U	mg/L		-0.0176	0.0176			
WG422171LFB	LFB	05/04/17 17:02	II170417-4	.498		.5027	mg/L	101	85	115			
WG422297CCV1	CCV	05/04/17 17:29	II170428-1	1.001		1.011	mg/L	101	90	110			
WG422297CCB1	CCB	05/04/17 17:32				U	mg/L		-0.024	0.024			
L36845-09LFM	LFM	05/04/17 17:53	II170417-4	.498	U	.51	mg/L	102	70	130			
L36845-09LFMD	LFMD	05/04/17 17:56	II170417-4	.498	U	.509	mg/L	102	70	130	0	20	
WG422297CCV2	CCV	05/04/17 18:05	II170428-1	1.001		.998	mg/L	100	90	110			
WG422297CCB2	CCB	05/04/17 18:08				U	mg/L		-0.024	0.024			
WG422297CCV3	CCV	05/04/17 18:29	II170428-1	1.001		1.02	mg/L	102	90	110			
WG422297CCB3	CCB	05/04/17 18:32				U	mg/L		-0.024	0.024			

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422144													
WG422144ICV	ICV	05/02/17 13:59	WI170310-3	2.416		2.324	mg/L	96	90	110			
WG422144ICB	ICB	05/02/17 14:00				U	mg/L		-0.02	0.02			
WG422160													
WG422160CCV	CCV	05/02/17 15:49	WI170426-3	2		1.996	mg/L	100	90	110			
WG422160CCB	CCB	05/02/17 15:52				U	mg/L		-0.02	0.02			
L36878-01AS	AS	05/02/17 15:56	WI170104-22	2	.48	2.44	mg/L	98	90	110			
L36878-02DUP	DUP	05/02/17 15:58			.48	.476	mg/L				1	20	
WG422160LFB	LFB	05/02/17 16:00	WI170104-22	2		1.973	mg/L	99	90	110			
WG422160CCV1	CCV	05/02/17 16:08	WI170426-3	2		2.029	mg/L	101	90	110			
WG422160CCB1	CCB	05/02/17 16:11				U	mg/L		-0.02	0.02			
WG422160CCV2	CCV	05/02/17 16:17	WI170426-3	2		2.015	mg/L	101	90	110			
WG422160CCB2	CCB	05/02/17 16:20				U	mg/L		-0.02	0.02			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422144													
WG422144ICV	ICV	05/02/17 13:59	WI170310-3	.609		.556	mg/L	91	90	110			
WG422144ICB	ICB	05/02/17 14:00				U	mg/L		-0.01	0.01			
WG422160													
WG422160CCV	CCV	05/02/17 15:49	WI170426-3	1		.954	mg/L	95	90	110			
WG422160CCB	CCB	05/02/17 15:52				U	mg/L		-0.01	0.01			
L36878-01AS	AS	05/02/17 15:56	WI170104-22	1	U	.947	mg/L	95	90	110			
L36878-02DUP	DUP	05/02/17 15:58			U	U	mg/L				0	20	RA
WG422160LFB	LFB	05/02/17 16:00	WI170104-22	1		.953	mg/L	95	90	110			
WG422160CCV1	CCV	05/02/17 16:08	WI170426-3	1		.964	mg/L	96	90	110			
WG422160CCB1	CCB	05/02/17 16:11				U	mg/L		-0.01	0.01			
WG422160CCV2	CCV	05/02/17 16:17	WI170426-3	1		.965	mg/L	97	90	110			
WG422160CCB2	CCB	05/02/17 16:20				U	mg/L		-0.01	0.01			

Nitrogen, ammonia

M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422666													
WG422666ICV	ICV	05/11/17 11:58	WI170404-1	11.988		12.089	mg/L	101	90	110			
WG422666ICB	ICB	05/11/17 12:00				U	mg/L		-0.05	0.05			
WG422512													
WG422512CCV1	CCV	05/11/17 12:36	WI170404-2	10		10.02	mg/L	100	90	110			
WG422512CCB1	CCB	05/11/17 12:38				U	mg/L		-0.05	0.05			
WG422512LFB1	LFB	05/11/17 12:39	WI170420-10	10		9.838	mg/L	98	90	110			
WG422512CCV2	CCV	05/11/17 12:54	WI170404-2					100	90	110			
WG422512CCB2	CCB	05/11/17 12:55				U	mg/L		-0.05	0.05			
L36878-01AS	AS	05/11/17 13:09	WI170420-10	10	U	10.131	mg/L	101	90	110			
WG422512CCV3	CCV	05/11/17 13:11	WI170404-2	10		10.095	mg/L	101	90	110			
WG422512CCB3	CCB	05/11/17 13:13				U	mg/L		-0.05	0.05			
L36878-02DUP	DUP	05/11/17 13:14			U	U	mg/L				0	20	RA
WG422512CCV4	CCV	05/11/17 13:29	WI170404-2	10		10.061	mg/L	101	90	110			
WG422512CCB4	CCB	05/11/17 13:31				U	mg/L		-0.05	0.05			
WG422512LFB2	LFB	05/11/17 13:33	WI170420-10	10		9.87	mg/L	99	90	110			
WG422512CCV5	CCV	05/11/17 13:47	WI170404-2	10		10.121	mg/L	101	90	110			
WG422512CCB5	CCB	05/11/17 13:48				U	mg/L		-0.05	0.05			
WG422512CCV6	CCV	05/11/17 14:03	WI170404-2	10		9.982	mg/L	100	90	110			
WG422512CCB6	CCB	05/11/17 14:04				U	mg/L		-0.05	0.05			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Nitrogen, total Kjeldahl

M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422633													
WG422633ICV	ICV	05/10/17 21:46	WI170501-4	4		3.65	mg/L	91	90	110			
WG422633ICB	ICB	05/10/17 21:47				U	mg/L		-0.1	0.1			
WG422419LRB1	LRB	05/10/17 21:49				U	mg/L		-0.1	0.1			
WG422419LFB1	LFB	05/10/17 21:50	WI170331-4	2.5		2.57	mg/L	103	90	110			
WG422633CCV1	CCV	05/10/17 22:00	WI170501-5	2.5		2.57	mg/L	103	90	110			
WG422633CCB1	CCB	05/10/17 22:01				U	mg/L		-0.1	0.1			
WG422633CCV2	CCV	05/10/17 22:13	WI170501-5	2.5		2.55	mg/L	102	90	110			
WG422633CCB2	CCB	05/10/17 22:15				U	mg/L		-0.1	0.1			
WG422419LRB2	LRB	05/10/17 22:22				U	mg/L		-0.1	0.1			
WG422419LFB2	LFB	05/10/17 22:24	WI170331-4	2.5		2.49	mg/L	100	90	110			
WG422633CCV3	CCV	05/10/17 22:27	WI170501-5	2.5		2.6	mg/L	104	90	110			
WG422633CCB3	CCB	05/10/17 22:28				U	mg/L		-0.1	0.1			
L36878-04LFM	LFM	05/10/17 22:37	WI170331-4	2.5	.2	2.73	mg/L	101	90	110			
L36878-05DUP	DUP	05/10/17 22:39			.4	.4	mg/L				0	20	RA
WG422633CCV4	CCV	05/10/17 22:42	WI170501-5	2.5		2.62	mg/L	105	90	110			
WG422633CCB4	CCB	05/10/17 22:43				U	mg/L		-0.1	0.1			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422295													
WG422295LCSW1	LCSW	05/04/17 15:20	PCN51287	6.01		6.1	units	101	5.9	6.1			
WG422295LCSW4	LCSW	05/04/17 19:29	PCN51287	6.01		6.1	units	101	5.9	6.1			
WG422295LCSW7	LCSW	05/04/17 23:11	PCN51287	6.01		6.1	units	101	5.9	6.1			
L36888-01DUP	DUP	05/05/17 2:26			8.2	8.2	units				0	20	
WG422295LCSW10	LCSW	05/05/17 2:29	PCN51287	6.01		6	units	100	5.9	6.1			
WG422295LCSW13	LCSW	05/05/17 5:58	PCN51287	6.01		6	units	100	5.9	6.1			

Phosphorus, total

M365.1 - Auto Ascorbic Acid (digest)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422705													
WG422705ICV	ICV	05/11/17 22:49	WI170505-5	.65228		.639	mg/L	98	90	110			
WG422705ICB	ICB	05/11/17 22:51				U	mg/L		-0.02	0.02			
WG422600LRB	LRB	05/11/17 22:52				U	mg/L		-0.02	0.02			
WG422600LFB	LFB	05/11/17 22:53	WI170505-4	.5		.488	mg/L	98	90	110			
L36878-01DUP	DUP	05/11/17 22:58			.08	.088	mg/L				10	20	RA
WG422705CCV1	CCV	05/11/17 23:04	WI170419-2	.5		.503	mg/L	101	90	110			
WG422705CCB1	CCB	05/11/17 23:05				U	mg/L		-0.02	0.02			
WG422705CCV2	CCV	05/11/17 23:17	WI170419-2	.5		.494	mg/L	99	90	110			
WG422705CCB2	CCB	05/11/17 23:18				U	mg/L		-0.02	0.02			
WG422705CCV3	CCV	05/11/17 23:32	WI170419-2	.5		.484	mg/L	97	90	110			
WG422705CCB3	CCB	05/11/17 23:33				U	mg/L		-0.02	0.02			
L36874-01LFM	LFM	05/11/17 23:41	WI170505-4	.5	.95	1.36	mg/L	82	90	110			M2
WG422705CCV4	CCV	05/11/17 23:46	WI170419-2	.5		.506	mg/L	101	90	110			
WG422705CCB4	CCB	05/11/17 23:47				U	mg/L		-0.02	0.02			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	20		19.63	mg/L	98	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.6	0.6			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	1.001		.99	mg/L	99	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	1.001		.93	mg/L	93	80	120			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	99.98315		96.06	mg/L	96	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	99.98315	1.9	98.86	mg/L	97	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	99.98315	1.9	97.66	mg/L	96	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	10		9.85	mg/L	99	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.6	0.6			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	10		9.86	mg/L	99	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.6	0.6			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422180													
WG422180PBW	PBW	05/03/17 9:45				U	mg/L		-20	20			
WG422180LCSW	LCSW	05/03/17 9:47	PCN52660	260		262	mg/L	101	80	120			
L36875-10DUP	DUP	05/03/17 10:11			76	70	mg/L				8	10	RA
L36889-07DUP	DUP	05/03/17 10:45			136	132	mg/L				3	10	RA
WG422250													
WG422250PBW	PBW	05/03/17 15:30				U	mg/L		-20	20			
WG422250LCSW	LCSW	05/03/17 15:30	PCN52660	260		256	mg/L	98	80	120			
L36910-02DUP	DUP	05/03/17 15:50			1410	1420	mg/L				1	10	

Residue, Non-Filterable (TSS) @105C

SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422162													
WG422162PBW	PBW	05/02/17 15:45				U	mg/L		-15	15			
WG422162LCSW	LCSW	05/02/17 15:48	PCN52660	160		154	mg/L	96	80	120			
L36878-03DUP	DUP	05/02/17 16:24			U	U	mg/L				0	10	RA
WG422343													
WG422343PBW	PBW	05/05/17 10:20				U	mg/L		-15	15			
WG422343LCSW	LCSW	05/05/17 10:22	PCN52661	160		154	mg/L	96	80	120			
L36889-05DUP	DUP	05/05/17 10:46			730	750	mg/L				3	10	

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.05437	mg/L	109	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.0003	0.0003			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.05005		.04759	mg/L	95	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.25025		.2525	mg/L	101	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.0003	0.0003			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.05005	.0002	.05415	mg/L	108	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.25025		.2534	mg/L	101	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.0003	0.0003			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.05005	.0002	.05189	mg/L	103	70	130	4	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.25025		.2494	mg/L	100	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.0003	0.0003			

Selenium, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05148	mg/L	103	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0003	0.0003			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.00022	0.00022			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.05005		.0476	mg/L	95	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.25025		.2486	mg/L	99	90	110			
WG422256CCB1	CCB	05/03/17 20:10				.00018	mg/L		-0.0003	0.0003			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.25025		.2442	mg/L	98	90	110			
WG422256CCB2	CCB	05/03/17 20:48				.00016	mg/L		-0.0003	0.0003			
L36878-03LFB	LFB	05/03/17 20:58	MS170321-3	.05005	U	.04736	mg/L	95	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.05005	U	.04635	mg/L	93	70	130	2	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.25025		.245	mg/L	98	90	110			
WG422256CCB3	CCB	05/03/17 21:17				.00018	mg/L		-0.0003	0.0003			

Silica, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	42.8		40.57	mg/L	95	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.6	0.6			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	1.07075		1.01	mg/L	94	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	1.07075		1.01	mg/L	94	80	120			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	21.415		20.47	mg/L	96	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	21.415	26.1	46.94	mg/L	97	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	21.415	26.1	47.2	mg/L	99	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	21.4		20.46	mg/L	96	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.6	0.6			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	21.4		20.43	mg/L	95	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.6	0.6			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Silica, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422344													
WG422344ICV	ICV	05/05/17 11:40	II170426-1	42.8		40.9	mg/L	96	95	105			
WG422344ICB	ICB	05/05/17 11:46				U	mg/L		-0.6	0.6			
WG422344PQV	PQV	05/05/17 11:49	II170424-4	1.07075		1.08	mg/L	101	70	130			
WG422344SIC	SIC	05/05/17 11:52	II170424-2	1.07075		1.07	mg/L	100	80	120			
WG422171LRB	LRB	05/05/17 11:58				U	mg/L		-0.44	0.44			
WG422171LFB	LFB	05/05/17 12:02	II170417-4	21.415		21.3	mg/L	99	85	115			
L36845-09LFM	LFM	05/05/17 12:20	II170417-4	21.415	2.9	23.94	mg/L	98	70	130			
L36845-09LFMD	LFMD	05/05/17 12:24	II170417-4	21.415	2.9	24.18	mg/L	99	70	130	1	20	
WG422344CCV1	CCV	05/05/17 12:30	II170428-1	21.4		20.61	mg/L	96	90	110			
WG422344CCB1	CCB	05/05/17 12:33				U	mg/L		-0.6	0.6			
WG422344CCV2	CCV	05/05/17 12:49	II170428-1	21.4		20.26	mg/L	95	90	110			
WG422344CCB2	CCB	05/05/17 12:52				U	mg/L		-0.6	0.6			

Silver, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.02004		.01978	mg/L	99	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.00015	0.00015			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.01001		.009449	mg/L	94	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.025025		.02406	mg/L	96	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.00015	0.00015			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.01001	U	.009135	mg/L	91	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.025025		.02406	mg/L	96	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.00015	0.00015			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.01001	U	.008911	mg/L	89	70	130	2	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.025025		.02422	mg/L	97	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.00015	0.00015			

Silver, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.02004		.02205	mg/L	110	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.00015	0.00015			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.00011	0.00011			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.01001		.01004	mg/L	100	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.025025		.0239	mg/L	96	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.00015	0.00015			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.025025		.02391	mg/L	96	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.00015	0.00015			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.01001	.00008	.009822	mg/L	97	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.01001	.00008	.009744	mg/L	97	70	130	1	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.025025		.0238	mg/L	95	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.00015	0.00015			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422347													
WG422347ICV	ICV	05/05/17 13:09	II170426-1	100		99.46	mg/L	99	95	105			
WG422347ICB	ICB	05/05/17 13:15				U	mg/L		-0.6	0.6			
WG422347PQV	PQV	05/05/17 13:18	II170424-4	1		1.03	mg/L	103	70	130			
WG422347SIC	SIC	05/05/17 13:22	II170424-2	1		1.01	mg/L	101	80	120			
WG422347LFB	LFB	05/05/17 13:28	II170417-4	100.0511		97.09	mg/L	97	85	115			
L36878-02AS	AS	05/05/17 13:41	II170417-4	100.0511	3.7	101.2	mg/L	97	85	115			
L36878-02ASD	ASD	05/05/17 13:44	II170417-4	100.0511	3.7	100.5	mg/L	97	85	115	1	20	
WG422347CCV1	CCV	05/05/17 14:00	II170428-1	50		49.92	mg/L	100	90	110			
WG422347CCB1	CCB	05/05/17 14:03				U	mg/L		-0.6	0.6			
WG422347CCV2	CCV	05/05/17 14:12	II170428-1	50		49.85	mg/L	100	90	110			
WG422347CCB2	CCB	05/05/17 14:15				U	mg/L		-0.6	0.6			

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422675													
WG422675ICV	ICV	05/10/17 14:38	WI170426-1	50		49.5	mg/L	99	90	110			
WG422675ICB	ICB	05/10/17 14:56				U	mg/L		-0.5	0.5			
WG422675CCV1	CCV	05/11/17 15:14	WI170510-1	50		49	mg/L	98	90	110			
WG422675CCB1	CCB	05/11/17 15:32				U	mg/L		-0.5	0.5			
WG422675PQV	PQV	05/11/17 15:49	WI170418-1	2.5		2.46	mg/L	98	70	130			
WG422675LFB	LFB	05/11/17 16:07	WI170304-2	30		30.5	mg/L	102	90	110			
WG422675CCV2	CCV	05/11/17 18:49	WI170510-1	50		48.7	mg/L	97	90	110			
WG422675CCB2	CCB	05/11/17 19:07				U	mg/L		-0.5	0.5			
L36860-11DUP	DUP	05/11/17 20:54			U	U	mg/L				0	20	RA
L36878-01AS	AS	05/11/17 21:30	WI170304-2	30	57.4	86.1	mg/L	96	90	110			
WG422675CCV3	CCV	05/11/17 22:24	WI170510-1	50		48.9	mg/L	98	90	110			
WG422675CCB3	CCB	05/11/17 22:42				U	mg/L		-0.5	0.5			
WG422675CCV4	CCV	05/12/17 0:47	WI170510-1	50		49	mg/L	98	90	110			
WG422675CCB4	CCB	05/12/17 1:05				U	mg/L		-0.5	0.5			
WG422675CCV5	CCV	05/12/17 11:26	WI170510-1	50		49.7	mg/L	99	90	110			
WG422675CCB5	CCB	05/12/17 11:44				U	mg/L		-0.5	0.5			
WG422675PQV1	PQV	05/12/17 12:02	WI170418-1	2.5		2.46	mg/L	98	70	130			
WG422675CCV6	CCV	05/12/17 13:13	WI170510-1	50		49.4	mg/L	99	90	110			
WG422675CCB6	CCB	05/12/17 13:31				U	mg/L		-0.5	0.5			

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422453													
WG422453ICV	ICV	05/08/17 14:20	WC170508-3	.34134		.344	mg/L	101	90	110			
WG422453ICB	ICB	05/08/17 14:23				U	mg/L		-0.06	0.06			
WG422453LFB	LFB	05/08/17 14:26	WC170508-6	.2577733		.303	mg/L	118	80	120			
WG422453CCV1	CCV	05/08/17 15:00	WC170508-4	.19333		.194	mg/L	100	90	110			
WG422453CCB1	CCB	05/08/17 15:03				U	mg/L		-0.06	0.06			
L36896-07AS	AS	05/08/17 15:10	WC170508-6	.2577733	U	.052	mg/L	20	75	125			M2
L36896-07DUP	DUP	05/08/17 15:13			U	U	mg/L				0	20	RA
WG422453CCV2	CCV	05/08/17 15:40	WC170508-4	.19333		.192	mg/L	99	90	110			
WG422453CCB2	CCB	05/08/17 15:43				U	mg/L		-0.06	0.06			
WG422453CCV3	CCV	05/08/17 16:03	WC170508-4	.19333		.192	mg/L	99	90	110			
WG422453CCB3	CCB	05/08/17 16:07				U	mg/L		-0.06	0.06			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.05256	mg/L	105	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.0003	0.0003			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.05		.04797	mg/L	96	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.1		.09844	mg/L	98	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.0003	0.0003			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.05	U	.04988	mg/L	100	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.1		.09872	mg/L	99	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.0003	0.0003			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.05	U	.04705	mg/L	94	70	130	6	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.1		.09991	mg/L	100	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.0003	0.0003			

Uranium, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.05281	mg/L	106	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.0003	0.0003			
WG422181LRB	LRB	05/03/17 19:39				U	mg/L		-0.00022	0.00022			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.05		.0501	mg/L	100	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.1		.1029	mg/L	103	90	110			
WG422256CCB1	CCB	05/03/17 20:10				.00011	mg/L		-0.0003	0.0003			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.1		.1033	mg/L	103	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.0003	0.0003			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.05	.0002	.05397	mg/L	108	70	130			
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.05	.0002	.05335	mg/L	106	70	130	1	20	
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.1		.1042	mg/L	104	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.0003	0.0003			

Zinc, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422315													
WG422315ICV	ICV	05/04/17 19:50	MS170420-2	.05		.0504	mg/L	101	90	110			
WG422315ICB	ICB	05/04/17 19:53				U	mg/L		-0.006	0.006			
WG422315LFB	LFB	05/04/17 19:56	MS170321-3	.05002		.0444	mg/L	89	85	115			
WG422315CCV1	CCV	05/04/17 20:27	MS170322-4	.5002		.5002	mg/L	100	90	110			
WG422315CCB1	CCB	05/04/17 20:30				U	mg/L		-0.006	0.006			
L36878-02AS	AS	05/04/17 21:01	MS170321-3	.05002	1.26	1.3	mg/L	80	70	130			
WG422315CCV2	CCV	05/04/17 21:04	MS170322-4	.5002		.4951	mg/L	99	90	110			
WG422315CCB2	CCB	05/04/17 21:07				U	mg/L		-0.006	0.006			
L36878-02ASD	ASD	05/04/17 21:10	MS170321-3	.05002	1.26	1.296	mg/L	72	70	130	0	20	
WG422315CCV3	CCV	05/04/17 21:22	MS170322-4	.5002		.5053	mg/L	101	90	110			
WG422315CCB3	CCB	05/04/17 21:25				U	mg/L		-0.006	0.006			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

Zinc, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG422256													
WG422256ICV	ICV	05/03/17 19:33	MS170420-2	.05		.052	mg/L	104	90	110			
WG422256ICB	ICB	05/03/17 19:36				U	mg/L		-0.006	0.006			
WG422181LRB	LRB	05/03/17 19:39				.002	mg/L		-0.0044	0.0044			
WG422181LFB	LFB	05/03/17 19:42	MS170321-3	.05002		.048	mg/L	96	85	115			
WG422256CCV1	CCV	05/03/17 20:07	MS170322-4	.5002		.492	mg/L	98	90	110			
WG422256CCB1	CCB	05/03/17 20:10				U	mg/L		-0.006	0.006			
WG422256CCV2	CCV	05/03/17 20:45	MS170322-4	.5002		.4939	mg/L	99	90	110			
WG422256CCB2	CCB	05/03/17 20:48				U	mg/L		-0.006	0.006			
L36878-03LFM	LFM	05/03/17 20:58	MS170321-3	.05002	1.42	1.452	mg/L	64	70	130			M3
L36878-03LFMD	LFMD	05/03/17 21:01	MS170321-3	.05002	1.42	1.445	mg/L	50	70	130	0	20	M3
WG422256CCV3	CCV	05/03/17 21:14	MS170322-4	.5002		.497	mg/L	99	90	110			
WG422256CCB3	CCB	05/03/17 21:17				U	mg/L		-0.006	0.006			

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L36878-01	WG422347	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG422526	Carbon, dissolved organic (DOC)	SM5310B	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).
	WG422272	Chemical Oxygen Demand	M410.4	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).
	WG422675	Chloride	M300.0 - Ion Chromatography	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).
	WG422493	Fluoride	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).
	WG422160	Nitrite as N, dissolved	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).
	WG422512	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG422633	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	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).
	WG422705	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M365.1 - Auto Ascorbic Acid (digest)	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).
	WG422180	Residue, Filterable (TDS) @180C	SM2540C	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).
	WG422162	Residue, Non-Filterable (TSS) @105C	SM2540D	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).
	WG422344	Silica, total recoverable	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG422675	Sulfate	M300.0 - Ion Chromatography	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).
	WG422453	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
			SM4500S2-D	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).
	WG422256	Zinc, total recoverable	M200.8 ICP-MS	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.

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L36878-02	WG422347	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG422526	Carbon, dissolved organic (DOC)	SM5310B	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).
	WG422272	Chemical Oxygen Demand	M410.4	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).
	WG422675	Chloride	M300.0 - Ion Chromatography	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).
	WG422493	Fluoride	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).
	WG422160	Nitrite as N, dissolved	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).
	WG422512	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG422633	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	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).
	WG422705	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M365.1 - Auto Ascorbic Acid (digest)	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).
	WG422180	Residue, Filterable (TDS) @180C	SM2540C	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).
	WG422162	Residue, Non-Filterable (TSS) @105C	SM2540D	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).
	WG422344	Silica, total recoverable	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG422675	Sulfate	M300.0 - Ion Chromatography	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).
	WG422453	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
			SM4500S2-D	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).
	WG422256	Zinc, total recoverable	M200.8 ICP-MS	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.

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L36878-03	WG422347	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG422526	Carbon, dissolved organic (DOC)	SM5310B	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).
	WG422272	Chemical Oxygen Demand	M410.4	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).
	WG422675	Chloride	M300.0 - Ion Chromatography	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).
	WG422493	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG422160	Nitrite as N, dissolved	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).
	WG422512	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG422633	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	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).
	WG422705	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M365.1 - Auto Ascorbic Acid (digest)	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).
	WG422180	Residue, Filterable (TDS) @180C	SM2540C	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).
	WG422162	Residue, Non-Filterable (TSS) @105C	SM2540D	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).
	WG422344	Silica, total recoverable	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG422675	Sulfate	M300.0 - Ion Chromatography	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).
	WG422453	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
			SM4500S2-D	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).
	WG422256	Zinc, total recoverable	M200.8 ICP-MS	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.

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L36878-04	WG422347	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG422526	Carbon, dissolved organic (DOC)	SM5310B	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).
	WG422272	Chemical Oxygen Demand	M410.4	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).
	WG422675	Chloride	M300.0 - Ion Chromatography	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).
	WG422493	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG422160	Nitrite as N, dissolved	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).
	WG422512	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG422633	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	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).
	WG422705	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M365.1 - Auto Ascorbic Acid (digest)	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).
	WG422180	Residue, Filterable (TDS) @180C	SM2540C	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).
	WG422344	Silica, total recoverable	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG422675	Sulfate	M300.0 - Ion Chromatography	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).
	WG422453	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
			SM4500S2-D	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).
	WG422256	Zinc, total recoverable	M200.8 ICP-MS	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.

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L36878-05	WG422347	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG422526	Carbon, dissolved organic (DOC)	SM5310B	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).
	WG422272	Chemical Oxygen Demand	M410.4	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).
	WG422675	Chloride	M300.0 - Ion Chromatography	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).
	WG422493	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG422160	Nitrite as N, dissolved	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).
	WG422512	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG422633	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	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).
	WG422705	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M365.1 - Auto Ascorbic Acid (digest)	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).
	WG422344	Silica, total recoverable	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG422675	Sulfate	M300.0 - Ion Chromatography	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).
	WG422453	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
			SM4500S2-D	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).
	WG422256	Zinc, total recoverable	M200.8 ICP-MS	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.

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-L

ACZ Sample ID: **L36878-01**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix:

Analysis Method: n/a

Extract Method: n/a

Workgroup: n/a

Analyst: n/a

Extract Date:

Analysis Date:

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil & Grease, Total Recoverable		See Case Narrative						

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-D

ACZ Sample ID: **L36878-02**

Date Sampled: 05/01/17 10:30

Date Received: 05/02/17

Sample Matrix:

Analysis Method: n/a

Extract Method: n/a

Workgroup: n/a

Analyst: n/a

Extract Date:

Analysis Date:

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil & Grease, Total Recoverable		See Case Narrative						

Rio Grande Silver, Inc.

Project ID: BO37296
Sample ID: WG-9360-B

ACZ Sample ID: **L36878-03**
Date Sampled: 05/01/17 11:05
Date Received: 05/02/17
Sample Matrix:

Analysis Method: n/a
Extract Method: n/a

Workgroup: n/a
Analyst: n/a
Extract Date:
Analysis Date:

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil & Grease, Total Recoverable		See Case Narrative						

Rio Grande Silver, Inc.

Project ID: BO37296
Sample ID: WG-9700-W

ACZ Sample ID: **L36878-04**
Date Sampled: 05/01/17 11:45
Date Received: 05/02/17
Sample Matrix:

Analysis Method: n/a
Extract Method: n/a

Workgroup: n/a
Analyst: n/a
Extract Date:
Analysis Date:

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil & Grease, Total Recoverable		See Case Narrative						

Rio Grande Silver, Inc.

Project ID: BO37296

Sample ID: WG-U

ACZ Sample ID: **L36878-05**

Date Sampled: 05/01/17 12:20

Date Received: 05/02/17

Sample Matrix:

Analysis Method: n/a

Extract Method: n/a

Workgroup: n/a

Analyst: n/a

Extract Date:

Analysis Date:

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil & Grease, Total Recoverable		See Case Narrative						


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>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #4) 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>	Amount of the true value or spike added recovered, 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>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

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.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
O	Analyte concentration is estimated due to result exceeding calibration range.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
J	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
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 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (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) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) 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>

ACZ Project ID: **L36878**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Rio Grande Silver, Inc.

ACZ Project ID: **L36878**

No certification qualifiers associated with this analysis

Rio Grande Silver, Inc.
BO37296

ACZ Project ID: L36878
Date Received: 05/02/2017 10:35
Received By:
Date Printed: 5/2/2017

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☐	☒
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☒	☐	☐
A change was made in the Received by Date:Time (Whiteout), Sample I.D. Lihne 6 section prior to ACZ custody.			

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4591	1.4	<=6.0	15	Yes
4904	1.2	<=6.0	14	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was 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.

Rio Grande Silver, Inc.
BO37296

ACZ Project ID: L36878

Date Received: 05/02/2017 10:35

Received By:

Date Printed: 5/2/2017

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).

ACZ Laboratories, Inc. *L36878*

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

CHAIN of CUSTODY

Report to:

Name: Randy McClure
Company: Rio Grande Silver, Inc.
E-mail: rmcclure@hecla-mining.com

Address: 625 USFS Road 504. 1A
Creede, CO 81130
Telephone: 719-658-1080

Copy of Report to:

Name: Janet Shangraw
Company: JNS, Inc.

E-mail: jshangraw@comcast.net
Telephone: 303-972-8596

Invoice to:

Name: Randy McClure
Company: Rio Grande Silver, Inc.
E-mail: rmcclure@hecla-mining.com

Address: 625 USFS Road 504. 1A
Creede, CO 81130
Telephone: 719-658-1080

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: R. McClure Sampler's Site Information State CO Zip code 81130 Time Zone mdt

*Sampler's Signature: _____ *I attest to the authenticity and validity of this sample. I understand that 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 #: <u>Mod-Extended-SW 2017</u>																			
PO#: <u>BO37296</u>																			
Reporting state for compliance testing:																			
Check box if samples include NRC licensed material? ☐																			
SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers																
WG-DL <i>5/1-17</i>	<i>5-1-17 10:30am</i>	SW	9	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WG-D	<i>5-1-17 10:30am</i>	SW	9	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WG-9360-B	<i>5-1-17 11:05am</i>	SW	9	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WG-9700-W	<i>5-1-17 11:45am</i>	SW	9	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WG-U	<i>5-1-17 12:20 pm</i>	SW	9	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Equipment Blank	<i>5-1-17</i>	SW	2	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Trip Blank	<i>5-1-17 10:30am</i>	SW	2	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(Mercury using 1631				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Samples not filtered				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
or preserved)				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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

Field Equip Blank and any listed trip blanks should be included on one report. There may be more than one cooler for this COC. Please send an additional report to rmcclure@hecla-mining.com

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

<i>Randy McClure</i>	<i>5-1-17 1:30 pm</i>	<i>[Signature]</i>	<i>5/2/17 1035</i>