

Sierrita Operations Environment, Land & Water Department 6200 West Duval Mine Road PO Box 527 Green Valley, Arizona 85622-0527

October 29, 2012

Via Certified Mail # 7011 1150 0000 0283 5989 Return Receipt Requested

Ms. Mindi Cross Arizona Department of Environmental Quality Water Quality Compliance Section 1110 West Washington Street Phoenix, Arizona 85007-2935

Re: Semiannual Groundwater Monitoring Report for Samples Collected During the Second and Third Quarters 2012 Mitigation Order on Consent Docket No. P-50-06

Dear Ms. Cross:

Attached please find three (3) hard copies and one (1) disc of the Semiannual Groundwater Monitoring Report for Samples Collected during Second and Third Quarters 2012, prepared by Clear Creek Associates for Freeport-McMoRan Sierrita Inc. (Sierrita). This document provides results of groundwater monitoring conducted during the second and third quarters of 2012, as agreed upon and described on letter from ADEQ to Sierrita dated April 17, 2009.

Please do not hesitate to contact me at (520) 393-2514 if you have any question regarding this submittal.

Sincerely,

Clint D. Beck, E.I.T. Environmental Engineer Freeport-McMoRan Sierrita Inc.

CDB/ms Attachment 20121029_001

 xc: Henry Darwin, Arizona Department of Environmental Quality Marcia Colquitt, Arizona Department of Environmental Quality John Broderick, Sierrita Lana Fretz, Sierrita Ned Hall, Freeport-McMoRan Copper & Gold
 Stuart Brown, Freeport-McMoRan Copper & Gold Jim Norris, Clear Creek Associates

SEMIANNUAL GROUNDWATER MONITORING REPORT FOR SAMPLES COLLECTED DURING THE SECOND AND THIRD QUARTERS 2012

MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06 PIMA COUNTY, ARIZONA



Prepared for:

FREEPORT-MCMORAN SIERRITA INC. 6200 West Duval Mine Road Green Valley, Arizona 85614

Prepared by:

CLEAR CREEK ASSOCIATES, P.L.C. 221 North Court Avenue Tucson, Arizona 85701

(520) 622-3222

October 24, 2012

SEMIANNUAL GROUNDWATER MONITORING REPORT FOR SAMPLES COLLECTED DURING THE SECOND AND THIRD QUARTERS 2012

MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06 PIMA COUNTY, ARIZONA

Prepared for:

FREEPORT-MCMORAN SIERRITA INC. 6200 West Duval Mine Road Green Valley, Arizona 85614

Approved by:

30842 JAMES R. NORRIS James R. Norris Arizona Registered 0842 Expires 12/31/14

October 24, 2012

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted in the second and third quarters of 2012 in the vicinity of the Freeport-McMoRan Sierrita Inc. (Sierrita) Tailing Impoundment (STI). Monitoring was conducted by Sierrita to characterize groundwater sulfate concentrations and groundwater elevations in the vicinity of the STI. This semiannual groundwater monitoring report was prepared by Clear Creek Associates on behalf of Sierrita.

1.1 Scope of Groundwater Monitoring

Quarterly groundwater monitoring pursuant to the Mitigation Order on Consent Docket No. P-50-06 has been conducted since the fourth quarter 2006 according to the specifications of the Work Plan (HGC, 2006a) submitted to and approved by Arizona Department of Environmental Quality (ADEQ). The purpose of the groundwater monitoring under the Work Plan was to document sulfate concentrations and water levels to determine the lateral and vertical extent of the sulfate plume and provide data for the development of conceptual and numerical models of the plume. Submittal of the Aquifer Characterization Report (HGC, 2009a), Feasibility Study (HGC, 2008), and Mitigation Plan (HGC, 2009b) fulfilled the objectives of monitoring recommended by the Work Plan.

In 2009, the groundwater monitoring requirements were revised in collaboration with ADEQ. The objectives of the revised groundwater monitoring plan are to track the location of the plume edge and monitor drinking water supply wells near the plume prior to implementation of the additional mitigation measures recommended in the Feasibility Study.

The details of the pre-implementation groundwater monitoring are outlined in letters from Sierrita to ADEQ on May 15, 2009 (Sierrita, 2009a) and June 12, 2009 (Sierrita, 2009b). Wells identified for annual, quarterly, and semiannual monitoring for pre-implementation groundwater monitoring are shown in Table 1 and Figure 1.

Groundwater sampling and analysis methods followed by Sierrita are described in the Quality Assurance Project Plan (QAPP) contained in Appendix E of the Work Plan (HGC, 2006a). Results of groundwater monitoring are presented in Section 2.1.



2. GROUNDWATER MONITORING

2.1 Monitoring Results

Analytical results and groundwater elevation data for the second and third quarters 2012 are tabulated in Table 2 and Table 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the second quarter 2012. Figure 3 shows the dissolved sulfate concentrations in drinking water supply wells in the vicinity of the plume and their corresponding sentinel wells in the third quarter 2012. The highest sulfate concentration measured at co-located wells was used for concentration contouring¹. Sulfate concentrations are reported as received from the laboratory with no modifications to the number of significant figures. Groundwater elevations in the second and third quarters 2012 are presented on Figures 4 and 5, respectively. Groundwater elevations were calculated using the depth to water measurements taken under non-pumping conditions whenever possible. Groundwater elevations for the IW wells are calculated from depth to water measurements taken while the wells were pumping. For this reason, the groundwater elevations are presented but not used for contouring. Third quarter groundwater elevation data is too sparse for contouring; however, the groundwater elevations are consistent with historical data.

2.2 Quality Assurance/Quality Control Review

Pursuant to Section 6.4 of the QAPP, a data verification report was prepared for quality assurance and quality control purposes. The data verification report reviews groundwater data collected by Sierrita during the second and third quarters 2012, and is included as Appendix A. Analytical laboratory reports for samples collected in second and third quarters 2012 are provided in portable document format on the compact diskette in Appendix B. As determined by

¹ The 250 milligram per liter (mg/L) sulfate contour in the vicinity of the MO-2007-1 wells is drawn based on the calculated maximum distances of 1080 feet for second quarter 2012 and 1180 feet for third quarter 2012, and that the sulfate plume could have migrated since groundwater concentrations at MO-2007-1C exceeded 250 mg/L in the fourth quarter of 2009. The distance migrated was calculated based on groundwater velocity of 393 feet per year determined using an average hydraulic gradient of 0.00869 between MO-2007-1C and TMM-1, a hydraulic conductivity of 31 feet per day, and an assumed effective porosity of 25 percent. The distance is considered a maximum because groundwater velocity was calculated with the highest measured hydraulic gradients between the MO-2007-1 wells and TMM-1 and the highest hydraulic conductivity measured at the MO-2009-1 wells.



the analytical data verification review, all data are of acceptable quality for use in the groundwater monitoring program conducted pursuant to the Mitigation Order.



3. FINDINGS

This semiannual data report provides the results of groundwater monitoring conducted in the vicinity of the STI for the second and third quarters 2012 (Table 1). Groundwater samples were collected from 68 plume area wells and depth to water measurements were collected from 84 wells during the second quarter 2012. In the third quarter 2012, groundwater samples and depth to water measurements were collected from 14 plume area wells. All wells were sampled according to the schedule presented in the pre-implementation groundwater monitoring plan except ESP-4 and I-10 which were not operational during second quarter 2012.

Sulfate concentration data indicate that the sulfate plume from the STI (as defined by the 250 mg/L sulfate concentration contour) extends northeast from the southeastern corner of the tailing impoundment to the vicinity of co-located wells CW-3/MO-2007-5. The plume then extends north from wells CW-3/MO-2007-5 to the west of wells NP-2/MO-2007-3 and to Duval Mine Road, just north of the MO-2007-1 wells (Figures 2 and 3). Comparison of the second and third quarters 2012 sulfate concentration data with those collected in previous quarters indicates that the there has not been any significant change to the overall plume geometry, although some northward migration of the plume is interpreted in the vicinity of the MO-2007-1 wells.

- Appendix C presents time series graphs of sulfate concentrations for drinking water supply wells in the vicinity of the edge of the plume, sentinel wells between the plume and the drinking supply wells, and other monitoring wells that document the edge of the plume. The time series graphs for water supply wells CW-6, CW-9, CW-10, and GV-01-GVDWID indicate that sulfate concentrations are steady over time and less than the interim action trigger level of 135 mg/L (HGC, 2006b). The time series graph for GV-02-GVDWID indicates that sulfate concentrations have been slightly declining since first quarter 2011.
- Sulfate concentrations reported for groundwater samples collected from sentinel wells are less than the 135 mg/L trigger level for more frequent monitoring at sentinel wells (Sierrita, 2009a). Since 2007, concentrations are steady over time at MO-2007-3B, MO-2007-4A, MO-2007-4B, and MO-2009-1; decrease at MO-2007-3C and MO-2007-6B; and increase at NP-2, MO-2007-4C, and MO-2007-6A.
- Data presented in the time series graphs indicate that sulfate concentrations increased in wells MO-2007-1B, MO-2007-1C, and ESP-1 along the edge of the plume. The sulfate concentrations in MO-2007-1B and MO-2007-1C are expected to increase until the mitigation measures identified by the Feasibility Study and Mitigation Plan are implemented.
- Appendix D presents time series graphs of groundwater elevation at the sentinel wells. The time series graphs show that water levels at these wells are relatively steady over

 time. Groundwater elevations for the sentinel wells are generally slightly higher in the first and second quarter than during the third and fourth quarters.



4. **REFERENCES**

- Hydro Geo Chem, Inc. (HGC). 2006a. Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Phelps Dodge Sierrita Tailing Impoundment, Pima County, Arizona. August 11, 2006, revised October 31, 2006.
- HGC. 2006b. Interim Action Identification, Technical Memorandum for Mitigation Order on Consent Docket No. P-50-06, Pima County, Arizona. December 22, 2006.
- HGC. 2008. Feasibility Study for Mitigation of Sulfate in the Vicinity of the Freeport-McMoRan Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent Docket No. P-50-06. October 22, 2008.
- HGC. 2009a. Revision 1, Aquifer Characterization Report, Task 5 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-50-06. Pima County, Arizona. January 30, 2009.
- HGC. 2009b. Mitigation Plan for Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Freeport-McMoRan Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent Docket No. P-50-06. May 8, 2009.
- Sierrita. 2009a. Letter from Ned Hall (Sierrita) to Cynthia Campbell (ADEQ) Regarding Mitigation Order on Consent Docket P-50-06, Response to ADEQ Comments on Recommended Groundwater Monitoring for Sulfate. May 15, 2009.
- Sierrita. 2009b. Letter from Ned Hall (Sierrita) to Cynthia Campbell (ADEQ) Regarding Mitigation Order on Consent Docket P-50-06, Supplemental Information on Recommended Groundwater Monitoring for Sulfate. June 12, 2009.



TABLES

TABLE 1 Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter	Quarterly Sampling First Quarter
CC of GV	501760	Sierrita	✓			
CW-3	627483	CWC	\checkmark		✓	
CW-6	627485	CWC	\checkmark	\checkmark	✓	\checkmark
CW-7	502546	CWC	WLO			
CW-8	543600	CWC	WLO			
CW-9	588121	CWC	\checkmark	✓	✓	\checkmark
CW-10	207982	CWC	\checkmark	✓	✓	\checkmark
ESP-1	623102	Sierrita	\checkmark		✓	
ESP-2	623103	Sierrita	✓		✓	
ESP-3	623104	Sierrita	\checkmark		✓	
ESP-4	623105	Sierrita	\checkmark		✓	
ESP-5	623106	Sierrita	WLO			
GV-01-GVDWID	603428	GVDWID	\checkmark	✓	✓	\checkmark
GV-02-GVDWID	603429	GVDWID	\checkmark	✓	✓	\checkmark
GV-SI-GVDWID	208825	GVDWID	\checkmark			
HAVEN GOLF	515867	Haven Golf	\checkmark			
I-10	608525	TBPI	\checkmark			
IW-1	623129	Sierrita	\checkmark			
IW-2A	216464	Sierrita	\checkmark			
IW-3A	623131	Sierrita	\checkmark			
IW-4	623132	Sierrita	\checkmark			
IW-5A	623133	Sierrita	\checkmark			
IW-6A	545565	Sierrita	\checkmark			
IW-8	508236	Sierrita	\checkmark			
IW-9	508238	Sierrita	\checkmark			
IW-10	508237	Sierrita	\checkmark			
IW-11	508235	Sierrita	\checkmark			
IW-12	545555	Sierrita	\checkmark			
IW-13	545556	Sierrita	\checkmark			
IW-14	545557	Sierrita	\checkmark			
IW-15	545558	Sierrita	\checkmark			
IW-16	545559	Sierrita	WLO			
IW-17	545560	Sierrita	WLO			
IW-18	545561	Sierrita	WLO			
IW-19	545562	Sierrita	\checkmark			
IW-20	545563	Sierrita	\checkmark			



TABLE 1 Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter	Quarterly Sampling First Quarter
IW-21	545564	Sierrita	~			
IW-22	200554	Sierrita	\checkmark			
IW-23	200555	Sierrita	✓			
IW-24	200556	Sierrita	✓			
M-8	87390	TBPI	✓		✓	
M-9	501652	TBPI	✓			
M-10	501653	TBPI	✓		✓	
M-20	906595	TBPI	✓			
MH-1	803629	Sierrita	WLO			
MH-3	803630	Sierrita	WLO			
MH-5	803632	Sierrita	WLO			
MH-6	803633	Sierrita	WLO			
MH-7	803634	Sierrita	WLO			
MH-9	803635	Sierrita	WLO			
MH-10	803636	Sierrita	✓			
MH-11	803637	Sierrita	✓			
MH-13A	904071	Sierrita	✓			
MH-13B	904072	Sierrita	✓			
MH-13C	904073	Sierrita	✓			
MH-14	528098	Sierrita	WLO			
MH-15E	528094	Sierrita	WLO			
MH-15W	528093	Sierrita	WLO			
MH-16E	528100	Sierrita	WLO			
MH-16W	528099	Sierrita	WLO			
MH-24	563799	Sierrita	WLO			
MH-25A	201528	Sierrita	✓			
MH-25B	208429	Sierrita	✓			
MH-25C	208426	Sierrita	✓			
MH-26A	201527	Sierrita	~			
MH-26B	208427	Sierrita	~			
MH-26C	208428	Sierrita	~			
MH-28	903648	Sierrita	~		 ✓ 	
MH-29	903649	Sierrita	~		✓	
MH-30	903884	Sierrita	~			
MO-2007-1A	907342	Sierrita	~		✓	
MO-2007-1B	907210	Sierrita	~		✓	



TABLE 1 Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter	Quarterly Sampling First Quarter
MO-2007-1C	907209	Sierrita	✓		✓	
MO-2007-2	906765	Sierrita	✓			
MO-2007-3B ¹	906816	Sierrita	✓	✓	 ✓ 	✓
MO-2007-3C ¹	906817	Sierrita	✓	✓	✓	✓
MO-2007-4A ²	907213	Sierrita	\checkmark	✓	✓	✓
MO-2007-4B ²	907212	Sierrita	✓	✓	 ✓ 	✓
MO-2007-4C ²	907211	Sierrita	✓	✓	✓	✓
MO-2007-5B	907456	Sierrita	✓		✓	
MO-2007-5C	907457	Sierrita	\checkmark		✓	
MO-2007-6A ³	907607	Sierrita	\checkmark	✓	✓	✓
MO-2007-6B ³	907606	Sierrita	\checkmark	✓	✓	✓
MO-2009-1 ⁴	910458	Sierrita	\checkmark	✓	✓	✓
NP-2 ¹	605898	CWC	✓	✓	✓	✓
PZ-7	561870	Sierrita	\checkmark			
PZ-8	561866	Sierrita	✓			
TMM-1	616156	Pima County	✓		 ✓ 	
1350	ND	TBPI	WLO			

Notes:

ADWR = Arizona Department of Water Resources CC OF GV = Country Club of Green Valley CWC = Community Water Company of Green Valley GVDWID = Green Valley Domestic Water Improvement District

ND = No Data

Sierrita = Freeport-McMoRan Sierrita Inc.

TBPI = Twin Buttes Properties, Inc.

WLO = Water Level Only

- ¹ Sentinel Well for CW-9
- ² Sentinel Well for CW-6
- ³ Sentinel Well for GV-01-GVDWID and GV-02-GVDWID
- ⁴ Sentinel Well for CW-10



TABLE 2 Analytical Results for Second and Third Quarters 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
CC of GV	501760	6/26/12	7.13	27.7	565	88.69
CW-3	627483	6/18/12	7.57	28.4	517	61.70
CW-6	607495	5/9/12	7.70	26.5	489	80.99
CVV-0	627485	8/29/12	7.44	25.2	537	82.24
CW-9	500101	5/9/12	7.67	28.3	356	44.39
Cw-9	588121	8/29/12	7.62	27.9	372	43.94
CW-10	207082	5/9/12	7.85	30.9	354	52.51
000-10	207982	8/29/12	7.74	31.4	369	50.95
ESP-1	623102	6/19/12	7.43	30.4	1221	395.72
ESP-2	623103	6/19/12	7.65	31.7	387	27.75
ESP-3	623104	6/19/12	7.87	30.6	390	34.98
ESP-4	623105		-	NS - Well is inop	erable	
GV-01-GVDWID	002400	6/7/12	7.21	26.9	420	37.87
GV-01-GVDWID	603428	8/29/12	7.38	27.6	409	36.15
		6/7/12	7.14	24.0	559	71.78
GV-02-GVDWID	603429	8/29/12	7.49	26.3	495	62.98
		8/29/12 DUP	7.49	26.3	495	63.26
GV-SI-GVDWID	208825	6/20/12	7.33	28.5	367	8.46
HAVEN GOLF	515867	5/29/12	6.41	279.0	633	88.05
I-10	608525			NS - Well is inop	erable	
IW-1	623129	5/21/12	6.71	32.0	1689	900
IW-2A	216464	5/21/12	6.89	31.1	638	121
IW-3A	623131	6/20/12	6.51	275.0	3170	1700
IW-4	623132	5/21/12	6.57	27.5	2650	1500
IW-5A	219131	5/22/12	6.68	26.6	2880	1600
IW-6A	545565	5/22/12	6.61	27.3	2950	1800
IW-8	508236	5/21/12	6.62	28.7	2670	1700
IW-9	508238	5/21/12	6.58	29.2	2680	1700
IW-10	508237	5/22/12	6.78	26.9	2890	1700
IW-11	508235	5/22/12	6.76	25.5	2810	1600
IW-12	545555	5/22/12	6.66	27.7	2640	1600
IW-13	545556	6/20/12	6.67	25.9	3450	1900
IW-14	545557	5/22/12	6.48	31.8	2620	1800
IW-15	545558	5/22/12	6.74	29.4	2850	1800
IW-19	545562	5/22/12	6.56	30.7	2730	1300
IW-20	545563	6/20/12	6.67	28.2	3080	1600
IW-21	545564	6/20/12	6.65	29.2	3130	1700



TABLE 2 Analytical Results for Second and Third Quarters 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-22	200554	5/22/12	6.72	26.6	2870	1600
IW-23	200555	5/22/12	6.72	28.9	2700	1600
IW-24	200556	5/22/12	6.47	27.3	2800	1700
M-8	087390	6/29/12	7.73	27.9	417	24
M-9	501652	6/27/12	7.26	27.4	581	81
M-10	501653	6/25/12	7.61	29.8	162	162
M-20	906595	6/26/12	7.15	28.3	3050	1722.9
MH-10	803636	6/5/12	6.88	29.3	2910	1500
MH-11	803637	5/30/12	6.83	30.3	2730	1440
MH-13A	904071	6/11/12	7.10	27.6	3340	1680
MH-13B	904072	6/11/12	7.24	29.1	2310	1020
MH-13C	904073	6/11/12	8.61	30.7	411	50
MH-25A	201528	5/1/12	7.83	27.8	376	13
MH-25B	208429	5/1/12	7.31	29.3	1864	1690
MH-25C	208426	5/1/12	7.39	29.5	1667	1290
MH-26A	201527	5/2/12	7.59	27.5	386	9
	209427	5/1/12	7.26	29.7	1912	1680
MH-26B	208427	5/1/12 DUP	7.26	29.7	1912	1750
MH-26C	208428	5/1/12	7.56	30.6	1428	820
MH-28	903548	5/21/12	6.64	28.8	3360	1600
MH-29	903649	5/21/12	6.62	26.6	3210	1600
MH-30	903884	4/26/12	7.05	28.1	1618	1738
MO-2007-1A	907342	6/12/12	7.40	27.9	371	16.98
MO-2007-1B	907210	6/12/12	6.99	29.0	1664	766.0
MO-2007-1C	907209	6/12/12	7.05	29.5	1085	406.4
MO-2007-2	906765	5/2/12	7.30	31.8	1245	543.50
MO-2007-3B	906816	5/8/12	7.88	30.8	329	37.64
IVIO-2007-3D	900010	8/7/12	7.88	29.1	419	36.26
MO-2007-3C	906817	5/7/12	8.10	30.3	440	95.99
WU-2007-30	900017	8/7/12	7.93	30.7	553	93.25
MO-2007-4A	907213	5/7/12	7.49	24.7	381	35.62
WIO-2007-4A	907213	8/13/12	7.53	26.5	378	35.33
MO-2007-4B	907212	5/7/12	7.83	29.0	342	34.25
IVIU-2007-4D	907212	8/13/12	7.75	28.2	353	34.02
		5/7/12	8.32	30.6	439	91.70
MO-2007-4C	907211	8/13/12	8.31	28.8	451	91.22
		8/13/12 DUP	8.31	28.8	451	91.48



TABLE 2 Analytical Results for Second and Third Quarters 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-5B	907456	6/20/12	7.62	30.0	1465	519.3
MO-2007-5C	907457	6/18/12	8.35	30.0	816	238.89
MO-2007-6A	907607	6/12/12	7.65	28.2	389	34.98
WIO-2007-0A	907007	8/13/12	7.84	29.2	362	36.91
MO-2007-6B	907606	6/12/12	7.62	31.5	399	55.99
WO-2007-0B	907000	8/13/12	7.61	32.2	374	56.54
MO-2009-1	910458	5/9/12	8.47	25.8	479	97.69
10-2009-1	910456	8/15/12	8.47	32.7	454	102.4
NP-2	605898	6/18/12	7.83	26.9	463	64.90
NF-2	000090	8/15/12	8.01	26.3	357	65.72
PZ-7	561870	6/6/12	6.93	25.9	1458	489.1
PZ-8	561866	4/25/12	6.41	24.1	935	344.9
TMM-1	616156	5/15/12	8.28	28.8	32.8	7.93

Notes:

ADWR = Arizona Department of Water ResourcesSU = Standard Unitsdeg C = degrees Celsius $\mu S/cm = microsiemens per centimeter$ mg/L = milligrams per LiterNR = not recordedNS = not sampledDUP = Duplicate sample



Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
CC of GV	501760	HGC	3527876.220	501635.382	2823.45	NR	- No soui	nding port
CW-3	627483	HGC	3523809.985	500047.663	2941.71	6/26/12	259.51	2682.20
CW-6	627485	CWC	3525794.239	500891.072	2867.00	5/9/12	255.74	2611.26
000-0	027405	0000	3323794.239	500691.072	2007.00	8/29/12	258.30	2608.70
CW-7	502546	CWC	3528094.155	499659.842	2987.50	5/9/12	425.90	2561.60
CW-8	543600	CWC	3525661.191	499798.520	2957.50	5/9/12	340.12	2617.38
CW-9	500101	CWC	2520740 704	E01072.040	2024.20	5/9/12	314.39	2519.91
Cw-9	588121		3528740.784	501072.040	2834.30	8/29/12	318.12	2516.18
CIN/ 40	007000	0.4/0		500012 201	2000 50	5/9/12	197.20	2671.30
CW-10	207982	CWC	3523455.502	500913.364	2868.50	8/29/12	201.50	2667.00
ESP-1	623102	Sierrita	3526448.677	499969.682	2953.43	6/19/12	357.76	2595.67
ESP-2	623103	Sierrita	3526924.656	500241.637	2934.60	6/19/12	346.84	2587.76
ESP-3	623104	Sierrita	3527377.239	500234.067	2935.80	6/19/12	364.50	2571.30
ESP-4	623105	Sierrita	3526132.758	499916.830	2958.60	NR	NR - Well is inoperable	
ESP-5	623106	Sierrita	3527082.232	502007.895	2820.00	6/19/12	229.73	2590.27
	000400	GVDWID	3522254.157	400040.000	2042.25	6/7/12	242.28	2700.07
GV-01-GVDWID	603428	GVDVID	3522254.157	499812.869	2942.35	8/29/12	231.00	2711.35
	000400			400700 007	2020 47	6/7/12	211.76	2718.71
GV-02-GVDWID	603429	GVDWID	3521654.457	499786.207	2930.47	8/29/12	219.00	2711.47
GV-SI-GVDWID	208825	HGC	3519509.930	497227.175	3042.65	6/20/12	257.92	2784.73
HAVEN GOLF	515867	ADWR	3526386.000	501651.000	ND*	5/29/12	220.00	
I-10	608525	Sierrita	325607.430	977264.441	3210.58	6/15/12	662.39	2548.19
IW-1	623129	Sierrita	3521277.779	496905.892	3144.69	5/21/12	438.48	2706.21
IW-2A	216464	Sierrita	3521337.953	497469.228	3112.28	5/21/12	404.32	2707.96
IW-3A	201732	Sierrita	3521722.640	497366.220	3121.45	6/20/12	401.37	2720.08
IW-4	623132	Sierrita	3522465.879	497371.700	3137.06	5/21/12	402.19	2734.87
IW-5A	219131		NO SUR	VEY DATA	•	5/22/12	468.65	
IW-6A	545565	Sierrita	3523708.756	497381.226	3132.26	5/22/12	419.75	2712.51
IW-8	508236	Sierrita	3522020.520	497368.253	3122.19	5/21/12	438.67	2683.52
IW-9	508238	Sierrita	3522207.639	497369.791	3102.94	5/21/12	518.95	2583.99
IW-10	508237	Sierrita	3523122.199	497370.367	3129.64	5/22/12	466.57	2663.07
IW-11	508235	Sierrita	3523428.954	497371.414	3127.20	5/22/12	439.67	2687.53
IW-12	803638	Sierrita	3523969.869	497364.911	3138.18	5/22/12	411.45	2726.73



Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
IW-13	545556	Sierrita	3524166.673	497363.820	3143.35	6/20/12	405.53	2737.82
IW-14	545557	Sierrita	3526924.656	497367.126	3146.42	5/22/12	458.57	2687.85
IW-15	545558	Sierrita	3526924.656	497372.873	3152.02	5/22/12	410.54	2741.48
IW-16	545559	Sierrita	3526924.656	497370.651	3162.85	6/27/12	402.80	2760.05
IW-17	545560	Sierrita	3525002.869	497373.717	3160.76	6/27/12	424.10	2736.66
IW-18	545561	Sierrita	3525169.771	497374.056	3171.15	6/27/12	436.97	2734.18
IW-19	545562	Sierrita	3525343.392	497373.630	3155.39	5/22/12	432.62	2722.77
IW-20	545563	Sierrita	3525568.770	497364.739	3164.21	6/20/12	414.50	2749.71
IW-21	545664	Sierrita	3525773.266	497374.585	3171.37	NR - E	Broken so	unding tube
IW-22	200554	Sierrita	3523273.592	497369.590	3128.25	5/22/12	448.78	2679.47
IW-23	200555	Sierrita	3522970.788	497369.237	3128.53	5/22/12	523.21	2605.32
IW-24	200556	Sierrita	3522633.594	497371.670	3113.29	5/22/12	512.88	2600.41
M-8	87390	Sierrita	3529692.237	499658.916	2999.53	6/29/12	464.98	2534.55
M-9	501652	Sierrita	3530303.954	499984.173	2973.81	6/27/12	455.78	2518.03
M-10	501653	Sierrita	3530143.114	499659.027	3005.68	6/25/12	482.73	2522.95
M-20	906595	TBPI	3528491.771	499082.070	3054.00	6/26/12	500.50	2553.50
MH-1	803629	Sierrita	3525872.911	497372.392	3179.27	4/25/12	436.95	2742.32
MH-3	803630	Sierrita	3525270.181	497472.430	3155.87	4/25/12	419.53	2736.34
MH-5	803632	Sierrita	3523725.339	497477.352	3123.47	6/14/12	398.80	2724.67
MH-6	803633	Sierrita	3522770.451	497436.646	3133.97	6/7/12	382.63	2751.34
MH-7	803634	Sierrita	3522016.471	497502.475	3111.23	6/14/12	381.09	2730.14
MH-9	803635	Sierrita	3521252.607	496438.181	3162.57	4/26/12	380.49	2782.08
MH-10	803636	Sierrita	3521236.861	495717.770	3187.84	6/5/12	366.25	2821.59
MH-11	803637	Sierrita	3524463.648	498749.381	3041.76	5/24/12	376.65	2665.11
MH-13A	904071	Sierrita	3523793.443	498823.857	3026.23	6/11/12	337.90	2688.33
MH-13B	904072	Sierrita	3523787.358	498829.881	3025.63	6/11/12	342.50	2683.13
MH-13C	904073	Sierrita	3523793.032	498797.461	3028.46	6/11/12	348.75	2679.71
MH-14	528098	Sierrita	3525269.340	497517.626	3153.46	4/25/12	419.83	2733.63
MH-15E	528094	Sierrita	3523274.327	497584.800	3111.37	6/14/12	391.96	2719.41
MH-15W	528093	Sierrita	3523275.003	497524.067	3117.07	4/25/12	397.62	2719.45
MH-16E	528100	Sierrita	3521870.233	497576.673	3097.72	4/26/12	362.82	2734.90
MH-16W	528099	Sierrita	3521870.818	497516.074	3100.24	4/25/12	364.24	2736.00
MH-24	563799	Sierrita	3523709.046	497390.515	3131.16	4/25/12	396.58	2734.58



Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-25A	201528	Sierrita	3526510.175	498880.349	3056.57	5/1/12	459.69	2596.88
MH-25B	208429	Sierrita	3526515.244	498870.343	3058.22	5/1/12	460.90	2597.32
MH-25C	208426	Sierrita	3526491.132	498874.666	3057.24	5/1/12	459.76	2597.48
MH-26A	201527	Sierrita	3527818.233	498852.692	3070.89	5/2/12	501.05	2569.84
MH-26B	208427	Sierrita	3527814.016	498839.900	3070.50	5/1/12	498.00	2572.50
MH-26C	208428	Sierrita	3527806.770	498865.240	3069.11	5/1/12	499.44	2569.67
MH-28	903548	Sierrita	3524609.980	497471.427	3142.18	5/21/12	398.64	2743.54
MH-29	903649	Sierrita	3522805.518	497604.326	3123.15	5/21/12	389.39	2733.76
MH-30	903884	Sierrita	3525926.812	496682.307	3232.45	4/26/12	420.61	2811.84
MO-2007-1A	907342	Sierrita	3529331.380	500016.947	2967.65	6/12/12	431.38	2536.27
MO-2007-1B	907210	Sierrita	3529325.119	500021.574	2966.82	6/12/12	431.95	2534.87
MO-2007-1C	907209	Sierrita	3529328.959	500013.405	2968.58	6/12/12	429.40	2539.18
MO-2007-2	906765	Sierrita	3527621.102	497912.410	3153.83	5/2/12	581.75	2572.08
MO 2007 2D	000040	Cierrite	2529509 904	500500 404	2012 15	5/8/12	362.09	2550.06
MO-2007-3B	906816	Sierrita	3528508.801	500522.491	2912.15	8/7/12	363.87	2548.28
MO-2007-3C	906817	Sierrita	3528508.743	500529.713	2911.90	5/7/12	362.35	2549.55
10-2007-30	900017	Siemia	3526506.745	500529.715	2911.90	8/7/12	364.49	2547.41
MO-2007-4A	907213	Sierrita	3525634.956	500383.682	2923.63	5/7/12	310.42	2613.21
WO-2007-4A	907213	Siemia	5525654.956	000000.002	2923.03	8/13/12	313.30	2610.33
MO-2007-4B	907212	Sierrita	3525613.952	500380.947	2923.57	5/7/12	311.47	2612.10
IVIO-2007-4D	907212	Siemia	3525013.952	500560.947	2923.37	8/13/12	314.42	2609.15
MO-2007-4C	907211	Sierrita	3525624.484	500382.217	2923.66	5/7/12	312.37	2611.29
WIO-2007-4C	907211	Siemia	5525624.464	500362.217	2923.00	8/13/12	315.55	2608.11
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	6/20/12	277.46	2666.89
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	6/18/12	281.66	2663.25
MO-2007-6A	907607	Sierrita	3521842.050	498367.161	3043.37	6/12/12	314.95	2728.42
WO-2007-0A	907007	Siemia	3521642.050	490307.101	3043.37	8/13/12	317.93	2725.44
MO-2007-6B	907606	Sierrita	2521940 405	409267 997	3043.05	6/12/12	325.69	2717.36
IVIU-2007-0D	307000	Siemia	3521849.495	498367.887	5045.05	8/13/12	329.12	2713.93
MO-2009-1	910458	Sierrita	3523369.438	500534.089	2000 70	5/9/12	225.63	2665.15
10-2009-1	910400	Siemid	3023309.430	500554.069	534.089 2890.78	8/15/12	234.23	2656.55
NP-2	605898	HGC	HGC 3528517.116 500582.904 2906.56	2906.56	6/18/12	359.28	2547.28	
INF -2	003090		5520517.110	300302.904	2300.00	8/15/12	360.45	2546.11



Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
PZ-7	561870	Sierrita	3526357.485	492533.171	3549.17	6/6/12	136.67	3412.50
PZ-8	561866	Sierrita	3524196.243	492972.681	3480.36	4/25/12	229.66	3250.70
TMM-1	616156	HGC	3529736.231	500018.323	2967.08	5/15/12	438.57	2528.51
1350	1350	Sierrita	3528649.387	499296.387	3033.25	6/29/12	479.57	2553.68

Notes:

ADWR = Arizona Department of Water Resources CWC = Community Water Company of Green Valley

ft amsl = feet above mean sea level

GVDWID = Green Valley Domestic Water Improvement District

HGC = Hydro Geo Chem, Inc.

m = meters

NR = Not Recorded

ND* = No Elevation Data

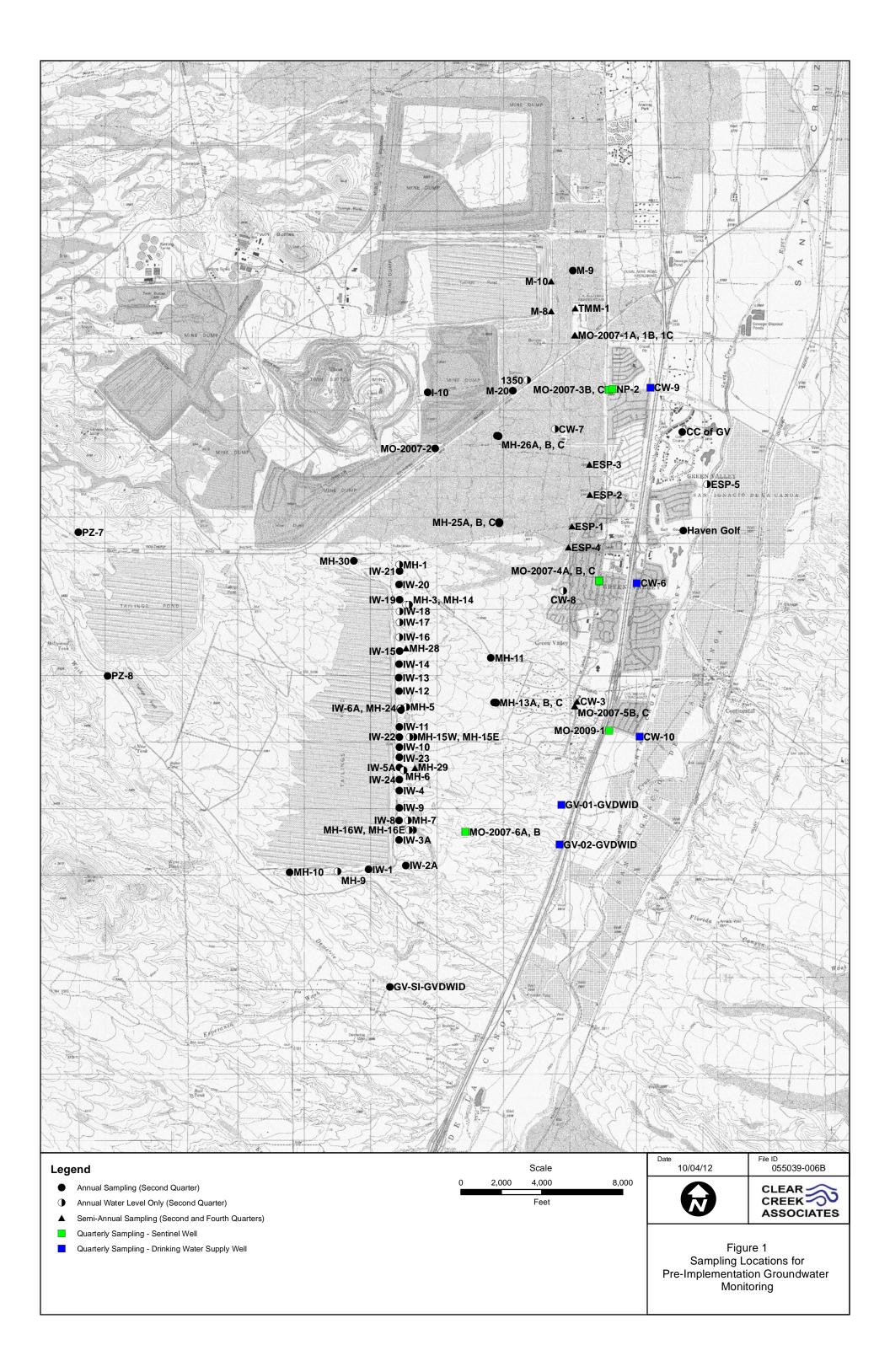
Sierrita = Freeport-McMoRan Sierrita Inc.

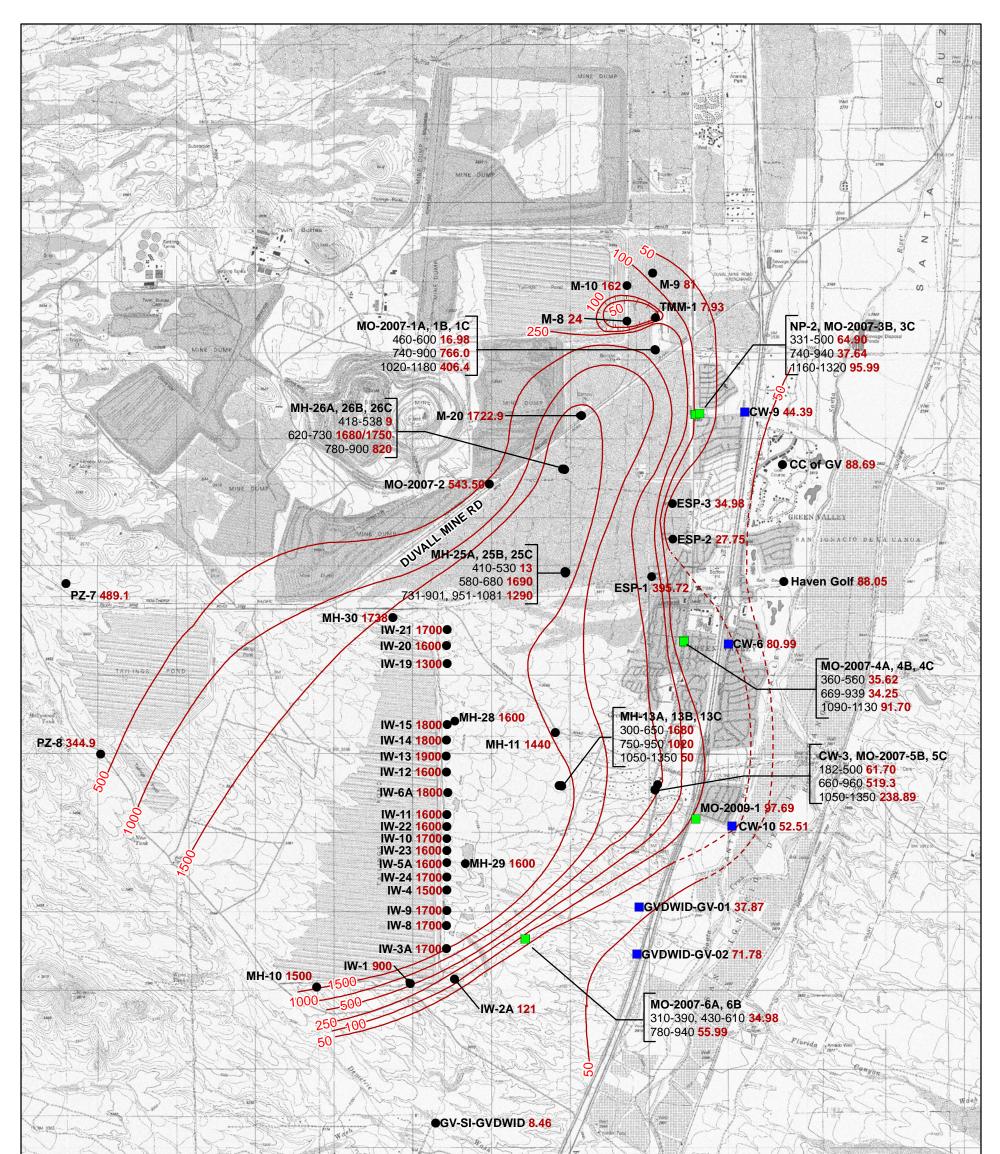
TBPI = Twin Buttes Properties, Inc.

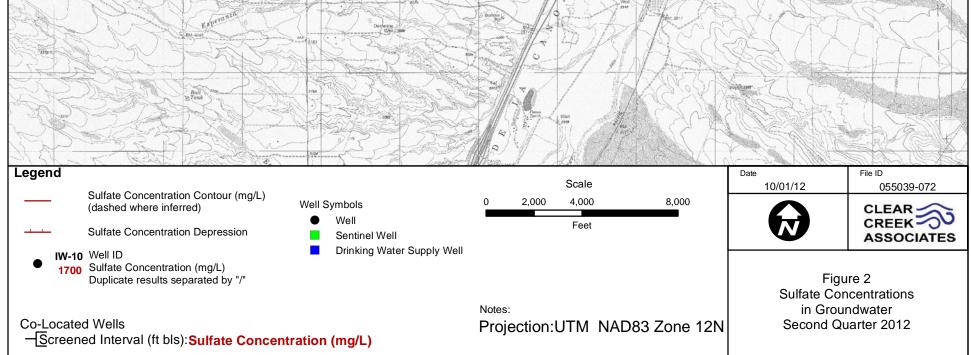
UTM = Universal Transverse Mercator, Zone 12 North American Datum 1983 (NAD83)

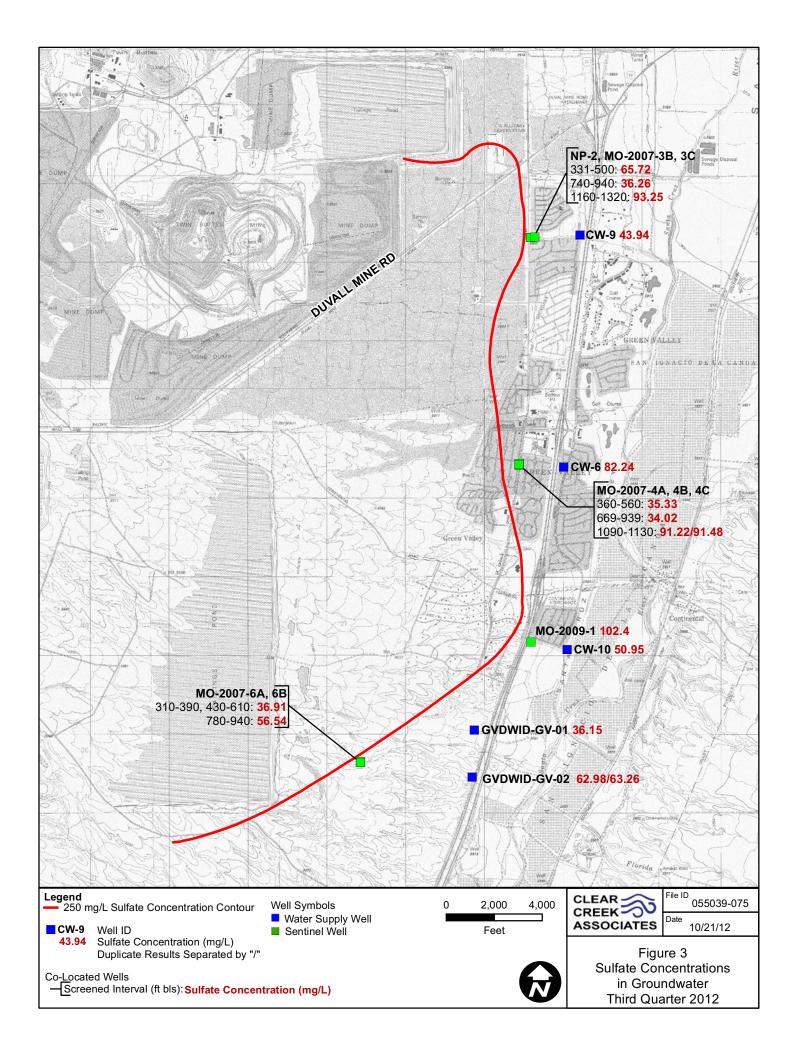


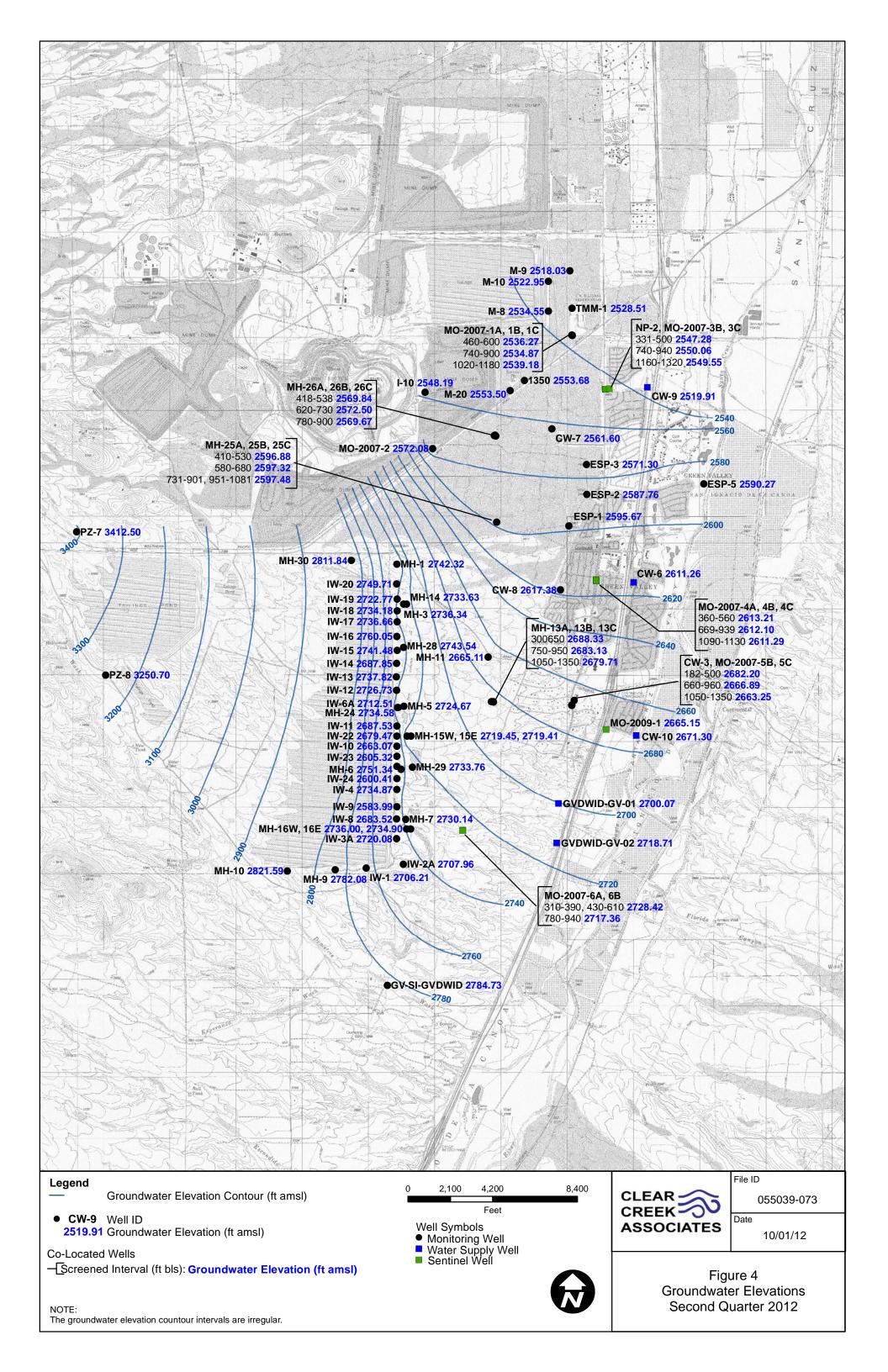
FIGURES

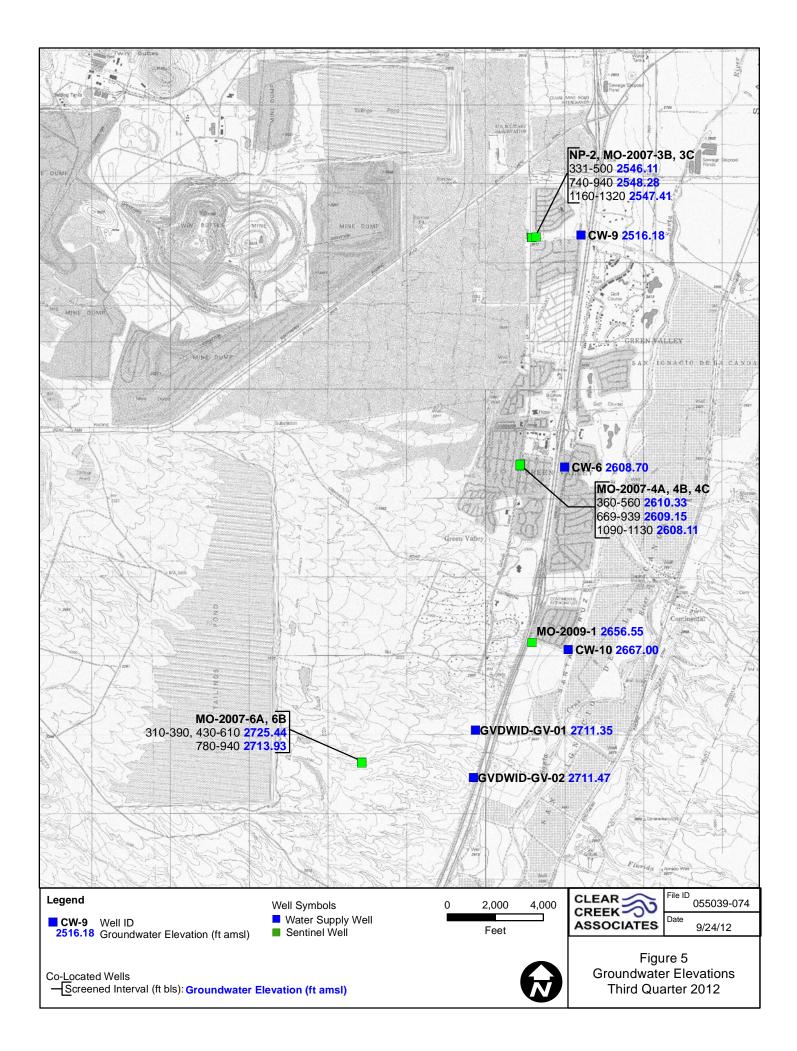












APPENDIX A

DATA VERIFICATION REPORT

APPENDIX A

DATA VERIFICATION REPORT

Prepared for:

FREEPORT-MCMORAN SIERRITA INC.

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Prepared by:

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October 24, 2012

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1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the second and third quarters 2012 by Freeport-McMoRan Sierrita Inc. (Sierrita) pursuant to the Mitigation Order on Consent Docket No. P-50-06. All analytical results for groundwater samples collected during this reporting period were provided to Sierrita by ACZ Laboratories, Inc. (ACZ) for preparation of the Semiannual Groundwater Monitoring Report.

This report does not review field sampling or sample handling procedures for Sierrita. Sierrita collected samples following the methods in the *Quality Assurance/Quality Control (QA/QC) Plan for Water Monitoring, Phelps Dodge Sierrita, Inc.* (PDSI, 2005) in Appendix E of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2006). Laboratory QA/QC data are evaluated according to the data quality indicators (DQIs) given in the Quality Assurance Project Plan (QAPP) (HGC, 2006).

Appendix B of the main text of this report contains laboratory reports for samples collected by Sierrita including Chain of Custody (COC) forms, laboratory correspondence, QC summaries, data qualifiers, and any case narratives. The analytical results for all 85 samples collected are contained in 18 reports having the ACZ Project numbers identified in the following table.

The results of the internal QA/QC tests performed by ACZ are presented with the laboratory reports included in Appendix B. Based on the results of surrogate spike recoveries, matrix spike recovery, and matrix spike duplicate tests, ACZ did not advise of any modifications that should be made regarding the usability and data validation status of the laboratory test results.



Sierrita Semiannual Groundwater Monitoring Report Appendix A Data Verification Report

1

ACZ Project ID	Wells Reported					
Second Quarter 2012 Number of well samples collected: 68 Number of duplicate samples collected: 1 Total number of samples collected: 69						
L94262	PZ-8, MH-30					
L94382	MO-2007-2					
L94511	L94511 MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-3C, MO-2007-3B, CW-10, CW CW-9, MO-2009-1					
L94664	L94664 TMM-1					
L94787	L94787 IW-23, IW-10, IW-22, IW-11, IW-6A, IW-12, IW-14, IW-15, IW-19, IW-1, IW-2A, IW-8, IW-9, IW-4, IW-24, IW-5A,					
L94836	HAVENGOLF					
L94876	MH-11					
L95049 MH-10, PZ-7, GV-1, GV-2						
L95164	MH-13B, MH-13A, MH-13C, MO-2007-6A, MO-2007-6B, MO-2007-1B, MO-2007-1A, MO-2007-1C					
L94380	94380 MH-26A, MH-26B, MH-25A, MH-26-C, MH-25-B, MH-25-C, DUP20120501A					
L94788	L94788 MH-28, MH-29					
L95294	MO-2007-5C, SIWELL					
L95293	L95293 CW-3, NP-2, ESP-2, ESP-1, ESP-3, IW-20, IW-21, IW-13, IW-3A, MO-2007-5B					
L95465						
L95422	L95422 CC of GV, M-9, M-10, M-20					
Third Quarter 2012 Number of well samples collected: 14 Number of duplicate samples collected: 2 Total number of samples collected: 16						
L96143	MO-2007-3B, MO-2007-3C					
L96276	L96276 MO-2007-6A, MO-2007-6B, MO-2007-4B, MO-2007-4C, MO-2007-4A, NP-2, MO-2009-1, DUP20120813A					
L96509	L96509 CW-6, CW-9, CW-10, GV-1, GV-2, DUP20120829A					

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2. LABORATORY QUALITY CONTROL

As specified in the QAPP, laboratory QC was maintained for all analysis through proper licensure, the use of approved analytical methods, QC measurements, appropriate turnaround time for analysis (timeliness), method detection limits (MDLs), and practical quantitation limits (PQLs). Each of these controls is discussed in the following subsections.

The review of laboratory QC included a review to identify any qualified data and an assessment to determine their significance. Additionally, the laboratory QC summaries were reviewed to verify that results met QA criteria.

2.1 Licensure

ACZ is licensed with the Arizona Department of Health Services (license number AZ0102) and is accredited in accordance with the National Environmental Laboratory Accreditation Conference.

2.2 Analytical Methods

The following methods were used for sulfate analysis during this monitoring period:

- U.S. Environmental Protection Agency (EPA) 300.0 (Ion-Chromatography)
- ASTM International Method D516-02 (Turbidimetric)

2.3 Method Detection Limits (MDLs) and Practical Quantification Limits (PQLs)

The MDLs and PQLs of the analytical methods used by ACZ are shown in the following table. The MDLs for analyses of samples were equal to or less than the target MDLs identified in the QAPP.

Method	MDL (mg/L)	PQL (mg/L)	Target MDL ¹ (mg/L)
EPA 300.0	0.5	3	10
D516-02	5	30	10

mg/L = milligrams per liter

¹ Target MDL from Table E.2 of QAPP

2.4 Timeliness

Holding time was derived from the EPA methods utilized and was calculated beginning from the time of sample collection in the field. All samples submitted for sulfate analysis were analyzed within the twenty-eight day holding time specified by each of the methods used for analysis.

2.5 Quality Control Measurements

The following laboratory QC samples were prepared and analyzed:

- Preparation blanks, calibration blanks, and calibration verification standards
- Analytical spikes and analytical spike duplicates
- Laboratory control samples
- Laboratory duplicate samples

2.5.1 Preparation Blanks, Calibration Blanks, and Calibration Verification Standards

Preparation blanks were run with each group of samples submitted for sulfate analysis. Preparation blanks were prepared from analyte-free water and treated as routine samples. Analytical results of the preparation blanks showed that no target analytes were detected at the indicated MDL.

Initial calibration blanks and initial calibration verification standards were analyzed prior to each group of samples. The results of each initial calibration blank analyzed showed no detections of the target analyte. Analytical results for the initial calibration verification standards and laboratory fortified blanks showed percent recoveries that were within the acceptance criteria specified by the ACZ QA plan and the QAPP.

2.5.2 Analytical Spikes and Analytical Spike Duplicates

Analytical spike and spike duplicate samples were analyzed for 10 percent of the samples that were analyzed. The spike samples were prepared by adding a sulfate spike to one randomly chosen sample out of every ten samples analyzed. Spike recoveries for most analyses were between 90 and 110 percent. Instances in which analytical spike recoveries were high, low or unusable are qualified with an "M1", "M2", or "M3" flag, respectively. The "M1" flag was used on reports L94876 and L96276. The "M2" qualifier was used on the L94380 report and the "M3" qualifier was used on the L94048, L94261, L94787, L95164, L94788, L95293, L95422, and L95934 reports. In all cases where an "M1", "M2", or "M3" qualifier was used, the method control sample recovery was checked to insure that it is acceptable. The method control samples were prepared by adding a sulfate spike to de-ionized water.

2.5.3 Laboratory Control Samples

Laboratory control samples were run for each group of samples submitted for sulfate analysis following the method of analysis. Recoveries for all laboratory control samples were within the acceptance criteria specified by ACZ.

2.5.4 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were also reviewed as part of this quality data verification report. Field duplicate samples are discussed in Section 3.1. The relative percent difference (RPD) for all laboratory duplicate samples were within 20 percent, which is the tolerance range set by the laboratory. The RPD is not used for data validation if the sample concentration is less than ten times the method detection limit. In cases where the RPD was used for data validation based on laboratory standard operating procedure, the results met QA criteria and demonstrated appropriate levels of precision for laboratory analysis of these samples.

October 24, 2012 055039-1.0

3. DATA QUALITY INDICATORS

The QAPP provides several DQIs for assessing the overall quality of the data. These DQIs include the following:

- Precision
- Bias
- Accuracy
- Representativeness
- Comparability
- Completeness
- Sensitivity

Each of these DQIs is discussed below in relation to groundwater sampling and analysis conducted by Sierrita.

3.1 Precision

Precision indicates how well a measurement can be reproduced. Precision is quantified by calculating the RPD between duplicate samples. For the purposes of QA/QC, precision was quantified by calculating the RPDs between duplicates among the following groups of duplicate samples:

- Laboratory duplicate samples
- Field duplicate samples

As discussed in Sections 2.5.2 and 2.5.4, there were no exceedances of RPD QA criteria based on laboratory standard operating procedures for any laboratory duplicates. During this monitoring period, a total of 3 field duplicate samples were collected by Sierrita for filtered sulfate analysis (DUP20120501A, DUP20120813A, and DUP20120829A). DUP20120501A was collected in the second quarter 2012 and DUP20120813A and DUP20120829A were collected in the third quarter 2012. The collection of one field duplicate sample in the second quarter 2012 does not meet the QA/QC goal of collecting one duplicate sample for every ten groundwater samples collected, as stated in Section 6 of Sierrita's quality assurance quality control plan, and

October 24, 2012 055039-1.0 does not meet the goal of collecting one duplicate sample for every twenty groundwater samples as stated in the Work Plan (HGC, 2006). As a corrective action, Clear Creek will review the QA/QC goals for duplicate samples with Sierrita.

Results of the field duplicate samples collected are provided in the table below. The range of RPD values was between 0.28 and 4.08 percent, all within the 20 percent acceptance criteria for field duplicates, as stated in Section 3.3.1 of the QAPP. Overall, the DQI for precision is met.

ACZ Project No.	Well ID	Duplicate ID	Sample (mg/l)	Duplicate (mg/l)	RPD
L94380	MH-26B	DUP20120501A	1680	1750	4.08%
L96276	MO-2007-4C	DUP20120813A	91.22	91.48	0.28%
L96509	GV-2	DUP20120829A	62.98	63.26	0.44%

mg/L = milligrams per liter RPD = Relative Percent Difference

3.2 Bias

Bias is a systematic distortion of measurements causing consistent errors in one direction. Bias is managed in this data set by the consistent application of standardized sample collection and analysis procedures.

3.3 Accuracy

Accuracy is a measure of the agreement of a measurement to a known value and is measured using the recoveries from laboratory control samples. As discussed in Sections 2.5.1, 2.5.2, and 2.5.3 respectively, there were no significant exceedances of the recovery QA criteria for any of the calibration standards, analytical spikes, or laboratory control standards. Based on this information, the overall accuracy of the data is judged sufficient for the purpose of aquifer characterization.

3.4 Representativeness

All well samples were taken from locations specified in the Pre-implementation Monitoring Plan (Sierrita, 2009) using sampling procedures specified in the QAPP. Therefore, the samples are

judged to provide a good representation of groundwater quality at the locations. The analytical data are judged to be representative of groundwater conditions because the analyses used standard procedures and methods that met QA/QC guidelines of the QAPP.

3.5 Comparability

All samples were collected using standardized procedures (PDSI, 2005) and were analyzed by ACZ using standardized methods. Insofar as standardized sample collection and analytical methods are adhered to, the sample results should be comparable.

3.6 Completeness

All samples collected by Sierrita were subsequently analyzed and reported by ACZ. All samples analyzed by ACZ are judged to satisfy the QA/QC criteria for this project and are deemed usable for aquifer characterization. Thus, the completeness of analytical results is 100 percent.

3.7 Sensitivity

The analytical methods used to analyze the samples meet the MDL requirements specified in Table E.2 of the QAPP. Therefore, the analytical sensitivity is considered acceptable for use in aquifer characterization.



Sierrita Semiannual Groundwater Monitoring Report Appendix A Data Verification Report

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4. **REFERENCES**

- Hydro Geo Chem, Inc. (HGC). 2006. Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Phelps Dodge Sierrita Tailing Impoundment, Pima County, Arizona. August 11, 2006, revised October 31, 2006.
- Phelps Dodge Sierrita, Inc. (PDSI). 2005. Quality Assurance/Quality Control Plan for Water Monitoring, Phelps Dodge Sierrita, Inc. June 2005.
- Sierrita. 2009. Letter from Ned Hall (Sierrita) to Cynthia Campbell (ADEQ) Regarding Mitigation Order on Consent, Docket P-50-06, Response to ADEQ Comments on Recommended Groundwater Monitoring for Sulfate. May 15, 2009.



Sierrita Semiannual Groundwater Monitoring Report Appendix A Data Verification Report

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APPENDIX B

ANALYTICAL DATA REPORTS



Analytical Report

Jon Anderson FMI Gold & Copper - Sierrita P.O. Box 527 6200 West Duval Mine Road Green Valley, AZ 85622-0527

Cc: Ben Daigneau

Project ID: ZS000001Z9 ACZ Project ID: L94788– SULFATE ONLY

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 25, 2012. This project was assigned to ACZ's project number, **L94788**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94788**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed and approved this report.



REPAD.01.11.00.01





FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-29

ACZ Sample ID: L94788-01 Date Sampled: 05/21/12 10:36 Date Received: 05/25/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual X	ຊ Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/06/12 15:36	6 mpb



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-28

ACZ Sample ID: L94788-02 Date Sampled: 05/21/12 11:50 Date Received: 05/25/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual X	ຊ Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/06/12 15:36	6 mpb



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Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

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Inorganic QC Summary

ACZ Project ID: L94788

Project ID:

ZS000001Z9

FMI Gold & Copper - Sierrita

Antimony, disse	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.02		.02066	mg/L	103.3	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0012	0.0012			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.01		.0111	mg/L	111	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.01	U	.01046	mg/L	104.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.01	U	.01054	mg/L	105.4	70	130	0.76	20	
Arsenic, dissolv	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05446	mg/L	108.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0015	0.0015			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05048	mg/L	100.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05534	mg/L	110.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05566	mg/L	111.2	70	130	0.58	20	
Beryllium, disse	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.04933	mg/L	98.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04993	mg/L	99.7	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05158	mg/L	103	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05224	mg/L	104.3	70	130	1.27	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05182	mg/L	103.6	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04963	mg/L	99.1	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05027	mg/L	100.3	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05154	mg/L	102.9	70	130	2.49	20	
Chromium, dise	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.956	mg/L	97.8	95	105			
	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539ICB			11120500.2	.5		.508	mg/L	101.6	85	115			
	LFB	05/30/12 22:42	11120509-2										
WG323539ICB WG323539LFB L94723-02AS	LFB AS	05/30/12 22:42 05/30/12 22:51	II120509-2 II120509-2	.5	U	.508	mg/L	101.6	85	115			

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L94788

Cobalt, dissolv	ed		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.997	mg/L	99.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.504	mg/L	100.8	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.506	mg/L	101.2	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.5	mg/L	100	85	115	1.19	20	
Copper, dissolv	ved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.992	mg/L	99.6	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.51	mg/L	102	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.513	mg/L	102.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.511	mg/L	102.2	85	115	0.39	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323683													
WG323683ICV	ICV	06/01/12 11:42	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323683ICB	ICB	06/01/12 11:45				U	mg/L		-0.3	0.3			
WG323685													
WG323685ICV	ICV	06/01/12 13:38	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323685ICB	ICB	06/01/12 13:42				U	mg/L		-0.3	0.3			
WG323685LFB1	LFB	06/01/12 13:49	WC120124-	5		5.1	mg/L	102	90	110			
L94787-14AS	AS	06/01/12 14:51	WC120124-	5	.3	5.12	mg/L	96.4	90	110			
L94787-14DUP	DUP	06/01/12 14:54			.3	.34	mg/L				12.5	20	R
WG323685LFB2	LFB	06/01/12 15:37	WC120124-	5		5.05	mg/L	101	90	110			
Lead, dissolved	ł		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05212	mg/L	104.2	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.049	mg/L	97.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04961	mg/L	99.1	70	130			
	4.00	00/04/40 5.44	M0400504.0	05005		05057		101	70	400	4 00	00	

M200.7 ICP Magnesium, dissolved ACZ ID Туре Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual WG323539 WG323539ICV ICV 05/30/12 22:24 II120430-3 100 101.38 mg/L 101.4 95 105 WG323539ICB ICB 05/30/12 22:30 U mg/L -0.6 0.6 WG323539LFB LFB 05/30/12 22:42 II120509-2 50.007 51.69 mg/L 103.4 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 50.007 .7 53.03 mg/L 104.6 85 115 L94723-02ASD ASD 05/30/12 22:54 II120509-2 50.007 .7 52.55 mg/L 103.7 85 115 0.91 20

U

.05057

mg/L

101

70

130

1.92

20

L94642-01ASD

ASD

06/01/12 5:14

MS120531-3

.05005

46-2 **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L94788

Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		2.018	mg/L	100.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.522	mg/L	104.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.527	mg/L	105.4	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.52	mg/L	104	85	115	1.34	20	
Nickel, dissolve			M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05174	mg/L	103.5	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0018	0.0018			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04696	mg/L	93.8	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04713	mg/L	94.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.04739	mg/L	94.7	70	130	0.55	20	
Nitrate/Nitrite as	Ν		M353.2 - I	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323865													
WG323865ICV	ICV	06/05/12 22:33	WI120405-3	2.416		2.379	mg/L	98.5	90	110			
WG323865ICB	ICB	06/05/12 22:34				U	mg/L		-0.06	0.06			
WG323867													
WG323867LFB	LFB	06/05/12 23:39	WI120211-3	2		2.033	mg/L	101.7	90	110			
L94788-01AS	AS	06/05/12 23:41	WI120211-3	2	.38	2.454	mg/L	103.7	90	110			
L94788-02DUP	DUP	06/05/12 23:44			1.04	1.04	mg/L				0	20	
Residue, Filteral	ole (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323390													
WG323390PBW	PBW	05/25/12 15:15				U	mg/L		-20	20			
WG323390LCSW	LCSW	05/25/12 15:15	PCN39024	260		258	mg/L	99.2	80	120			
L94797-03DUP	DUP	05/25/12 15:29			970	970	mg/L				0	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05147	mg/L	102.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04555	mg/L	91	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	.0005	.05265	mg/L	104.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	.0005	.05374	mg/L	106.4	70	130	2.05	20	

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L94788

Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323927													
WG323927ICB	ICB	06/06/12 14:52				U	mg/L		-3	3			
WG323927ICV	ICV	06/06/12 14:52	WI120523-4	20		20.9	mg/L	104.5	90	110			
WG323927LFB	LFB	06/06/12 15:13	WI120508-1	10		9.8	mg/L	98	90	110			
L94788-01DUP	DUP	06/06/12 15:36			1600	1640	mg/L				2.5	20	
L94788-02AS	AS	06/06/12 15:36	SO4TURB10	10	1600	1880	mg/L	2800	90	110			М
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05387	mg/L	107.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05013	mg/L	100.2	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05096	mg/L	101.8	70	130			
	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05199	-	103.9	70	130	2	20	



(800) 334-5493

ACZ Project ID: L94788

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94788-01	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323927	Sulfate	D516-02 - Turbidimetric	М3	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.
L94788-02	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323927	Sulfate	D516-02 - Turbidimetric	М3	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.



FMI Gold & Copper - Sierrita

ACZ Project ID: L94788

No certification qualifiers associated with this analysis

AGE Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje	ect ID:		L94788
ZS000001Z9	Date Rec	eived: 0	5/25/201	2 09:11
	Receive	ed By:		ksj
	Date Pr	rinted:	5/2	25/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
Na15437	2.3	15

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L94788
Date Received:	05/25/2012 09:11
Received By:	ksj
Date Printed:	5/25/2012

Sample Container Preservation

SAMPLE	CLIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID		
L94788-01	MH-29			Y		Y			1						
L94788-02	MH-28			Y		Y									
Sample Container Preservation Legend															
Abbreviatio	n Description	Contai	ner Typ	e Pr	eservativ	/e/Limi	ts								
R	Raw/Nitric		pH must be < 2												
В	Filtered/Sulfuric	BLUE		p⊦	l must be	< 2									
BK	Filtered/Nitric	BLACK	ζ.	p⊦	l must be	< 2									
G	Filtered/Nitric	GREE	N	p⊦	l must be	< 2									
0	Raw/Sulfuric	ORAN	GE	p⊦	l must be	< 2									
Р	Raw/NaOH	PURPL	.E	p⊦	pH must be > 12 $*$										
Т	Raw/NaOH Zinc Acetate	TAN		p⊦	pH must be > 12										
Y	Raw/Sulfuric	p⊦	pH must be < 2												
YG	Raw/Sulfuric	SS pH must be < 2													
N/A	No preservative needed														
RAD	Gamma/Beta dose rate	m	ust be < 2	250 µR/l	hr										

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

Report to: Name: Jon Anderson			Addre	ss: 620	0 W. I	Duval Mi	ne Road						
	IcMoRan Sierrita Inc.				<u> </u>								
E-mail: jonathan_and	erson@fmi.com		Telephone: 520-393-2714										
Copy of Report to:		· • • • •											
Name: Ben Daigneau	1		E-mail: bdaigneau@clearcreekassociates.com										
Company: Clear Cree	ek Associates		Telep	hone:	520-62	2-3222							
Invorce to:													
Name:			Addre	ss:									
Company:			_										
E-mail:			Telep	hone:					· · · · ·				
	ast holding time (HT), or if insuffic				ete			YES					
	ion, shall ACZ proceed with reque ontact client for further instruction				0"			NO					
	roceed with the requested analyse					a will be q	ualified.						
	V Compliance Monitoring?							YES	×				
If yes, please include s PROJECT INFORMA	tate forms. Results will be reporte	d to PQL.		ΑΝΑΓΥ	'SI S R	EOUESTE) attach	NO list or us	74	antar			
		-											
Quote #: Project/PO #: ZS000	00179	-	BLS										
Reporting state for co			of Containers	Quarterly									
Sampler's Name:	inplantoo tooting.		l o	1 <u>4</u>									
σ	Clicensable material? Yes No		f f	La l									
SAMPLEIDENTIER		Matrix		O									
о _{MH-29}	05/21/12 : 10:36	GW	3	×									
MH-28	05/21/12 : 1150	GW	3	×									
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		_		┢									
Matrix SW (Surface	Water) · GW (Ground Water) · WW (Was	Nator) - Di	//Drink	no Water		(udge) - SO ((Soil) • OI	(Oil) • Other	(Specify)				
REMARKS		le malery B		ng traio.	, 02(0		(00) 00	(4.1) 41.1	(
				~ ~									
Copy of report to Be	n Daigneau contains only "SO4	" results v	with Q	C Sumi	mary.								
LIPS Tracking # /	2867 7E4	22	17	$\gamma \Lambda I$	í i	マクタ	7						
		a 5	16	100			/						
		0 a a malifi		-	the re	verne eld	of this	000					
	Please refer to ACZ's terms		ons loc			Verse side /ED BY:	e or this		DA LE:				

White - Return with sample. Yellow - Retain for your records.

APPENDIX C

TIME SERIES GRAPHS OF SULFATE CONCENTRATION

		Dissolved sulfate concentration reported in milligrams per liter (mg/l)																						
Well ID	Q4 2006	Q1 2007	Q2 2007	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q12012	Q22012	Q32012
CW-6	12/04/06 46.2	01/03/07 49.2	05/14/07 68.7	07/10/07 57.6	10/02/07 54.2	01/08/08 48.9	04/15/08 51.2	07/08/08 47.9	10/07/08 51.5	02/06/09 48.2	04/22/09 47.9	09/17/09 70	11/05/09 59.7	02/10/10 46.6	05/14/10 52.1	07/27/10 55.2	10/14/10 52.5	02/24/11 70.3	04/28/11 58.1	07/20/11 81	12/14/11 54.5	1/24/12 60.17	5/9/12 80.99	8/29/201 82.24
CW-9	12/04/06 44.5	01/03/07 44.9	05/14/07 47.8	07/10/07 46.7	10/02/07 46.4	01/08/08 47.3	04/15/08 43.7	07/08/08	10/07/08 43.5	02/06/09 45.1	04/22/09 44.3	07/30/09 43.8	11/05/09 44.7	02/10/10 43.4	05/14/10	07/27/10 44.1	10/14/10 44.2	02/24/11	04/28/11	07/20/11 43.9	12/14/11 43.8	1/24/12 43.8	5/9/12 44.39	8/29/201 43.94
CW-10	12/04/06	01/24/07 48.6	05/14/07 52.8	07/10/07 51.7	40.4 10/02/07 47.7	01/08/08 45.3	04/15/08 50.8	07/08/08	43.3 10/07/08 48.3	02/06/09 51.3	04/22/09 47.9	43.0 07/30/09 49.2	11/20/09 49.9	02/10/10 44.9	05/14/10 49.1	07/27/10 48.9	10/14/10 48.5	02/24/11	04/28/11 49.6	43.9 07/20/11 50.7	43.8 12/14/11 49.24	43.8 1/24/12 52.32	5/9/12 52.51	8/7/2012 50.95
ESP-1	12/04/06 262	01/03/07 242	05/14/07 113	07/10/07 94	10/12/07 110	01/23/08 100	04/18/08 102	07/25/08 104	10/30/08 121	01/29/09	04/16/09 130	49.2 NS	11/10/09 173	NS	4/28/10 204	48.9 NS	10/15/10 291	NS	05/03/11 359	NS	12/13/11 387.52	NS	6/19/12 395.72	NS
ESP-2	12/04/06 29.6	01/03/07 31.3	05/14/07 28.4	07/10/07 28.6	10/12/07 30	01/23/08	04/18/08 27.6	07/25/08	10/30/08 30.1	01/29/09 27.8	04/16/09 28.2	NS	11/10/09 28.9	NS	4/28/10 28.7	NS	10/15/10 27.9	NS	05/03/11 28.1	NS	11/22/11 26.65	NS	6/19/12 27.75	NS
ESP-3	12/04/06 36.2	01/03/07 37.5	05/14/07 36.6	07/10/07 36.6	10/12/07 40	01/23/08 30	04/18/08 35.7	07/25/08	10/30/08 36.8	01/29/09 35.2	04/16/09 35.3	NS	11/12/09 39.5	NS	4/28/10 35.8	NS	10/15/10 35.2	NS	05/03/11 35.1	NS	11/22/11 34.18	NS	6/19/12 34.98	NS
GV-01-GVDWID		01/09/07 40.9	04/10/07 43.2	07/11/07 41.5	10/03/07 43.8	01/07/08 45.7	04/16/08 44.1	07/07/08 45.2	11/25/08 39	03/03/09 42.3	04/22/09 40.6	07/29/09 44.3	11/04/09 45.1	01/27/10 47.0	04/01/10 48.5	07/28/10 39.4	10/14/10 38.4	01/20/11 40.0	04/28/11 42.9	07/20/11 39.6	12/7/11 39.31	3/14/12 35.56	6/7/12 37.87	8/29/201 36.15
GV-02-GVDWID		01/09/07 103	04/10/07 106	07/11/07 98	10/03/07 100	01/07/08 98	04/16/08 97	07/07/08 93.2	11/25/08 93.5	02/04/09 98.8	04/22/09 79.5	07/29/09 91.6	11/04/09 93.2	01/27/10 94.9	04/01/10 99.5	07/28/10 83	10/14/10 90.7	01/20/11 92.7	04/28/11 87.3	07/20/11 87.2	12/7/11 77.88	3/14/12 77.35	6/7/12 71.78	8/29/2012 62.98
MO-2007-1A				08/08/07 19.2	10/09/07 20	01/24/08 20	04/09/08 21	07/14/08 16.6	10/17/08 17.9	01/16/09 18.1	04/01/09 18.2	07/01/09 16.3	10/22/09 16.6	NS	04/16/10 18.5	NS	10/13/10 16	NS	05/05/11 17.9	NS	10/6/11 16.143	NS	6/12/12 16.98	NS
MO-2007-1B				08/02/07 18.9	10/09/07 30	01/24/08 30	04/09/08 35	07/14/08 39.8	10/17/08 54.3	01/16/09 69.7	04/01/09 84.1	07/01/09 99	10/22/09 143	NS	04/16/10 230	NS	10/13/10 340	NS	05/05/11 479	NS	10/6/11 604.67	NS	6/12/12 766.0	NS
MO-2007-1C				07/31/07 112	10/09/07 90	01/24/08 140	04/09/08 149	07/14/08 165	10/21/08 146	01/16/09 233	04/01/09 229	07/01/09 236	10/22/09 301	NS	04/16/10 320	NS	10/13/10 376	NS	04/20/11 381	NS	10/6/11 393.94	NS	6/12/12 406.4	NS
MO-2007-3B				09/10/07 38	10/09/07 40	01/21/08 40	04/16/08 37	07/14/08 37.8	10/22/08 42.4	01/19/09 36.9	04/01/09 38.2	07/27/09 37.2	10/22/09 39.1	01/20/10 37.9	04/22/10 41.9	07/21/10 38.7	10/26/10 39.1	01/18/11 38.2	05/04/11 38.1	07/06/11 38.3	10/5/11 37.822	1/11/12 39	5/8/12 37.64	8/7/2012 36.26
MO-2007-3C				07/05/07 136	10/10/07 110	01/21/08 130	04/15/08 127	07/14/08 126	10/21/08 103	01/19/09 113	04/01/09 115	07/22/09 107	10/22/09 108	01/20/10 103	04/14/10 110	07/21/10 101	10/26/10 104	01/18/11 106	05/04/11 107	07/06/11 101	10/5/11 96.818	1/11/12 104.03	5/7/12 95.99	8/7/2012 93.25
MO-2007-4A					10/09/07 37	01/22/08 40	04/16/08 33.1	07/17/08 34.8	10/22/08 40.1	01/19/09 35.9	04/02/09 36.7	07/01/09 36.3	10/26/09 35.7	01/26/10 36.0	04/14/10 37.0	07/21/10 34.9	10/13/10 35.2	01/19/11 35.8	05/04/11 35.9	07/06/11 35.3	10/5/11 34.47	1/17/12 37.55	5/7/12 35.62	8/13/201 35.33
MO-2007-4B					10/11/07 37.6	01/07/08 60	04/16/08 33.6	07/18/08 35.5	10/22/08 37.4	01/21/09 32.9	04/02/09 34.6	07/01/09 34.7	10/26/09 34.5	01/26/10 34.1	04/14/10 35.1	07/21/10 34	10/13/10 34.2	01/19/11 34.6	05/04/11 34.5	07/06/11 34.4	10/5/11 34.194	1/17/12 33.14	5/7/12 34.25	8/13/201 34.02
MO-2007-4C				08/16/07 78.7	10/12/07 80.1	01/22/08 80	04/16/08 80	07/18/08 78.6	10/22/08 84.9	01/21/09 78.5	04/02/09 81	07/01/09 82.7	10/26/09 83.9	01/26/10 83.2	04/14/10 87.7	07/21/10 85.6	10/13/10 86.5	01/19/11 87.6	05/04/11 88.1	07/06/11 85	10/5/11 89.355	1/12/12 92.92	5/7/12 91.7	8/13/2012 91.22
MO-2007-6A					10/02/07 26.5	01/22/08 30	04/18/08 20.5	07/24/08 16.9	10/23/08 18.6	01/22/09 26.9	04/02/09 23.7	07/22/09 19.8	10/26/09 23.5	01/20/10 24.6	04/21/10 34.7	08/10/10 26.8	10/26/10 33.9	01/18/11 30.2	05/05/11 29.2	07/07/11 36.6	10/6/11 34.109	1/11/12 43.51	6/12/12 34.98	8/13/2012 36.91
MO-2007-6B					10/04/07 93.6	01/22/08 80	04/17/08 90.4	07/24/08 81.5	10/23/08 63.2	01/22/09 84.5	04/02/09 75.7	07/22/09 63.5	10/26/09 62.1	01/20/10 69.7	04/21/10 57.9	08/10/10 68.8	10/26/11 57.7	01/18/11 58.5	05/05/11 57.2	07/07/11 57.5	10/6/11 55.342	1/11/12 57.78	6/12/12 55.99	8/13/2012 56.54
MO-2009-1											04/24/09 62.1	07/29/09 97.7	11/03/09 109	01/25/10 82.1	04/20/10 99	08/10/10 109	12/15/10 94	02/02/11 92	06/16/11 102	08/31/11 108	12/1/11 91.82	1/11/12 93.84	5/9/12 97.69	8/15/2012 102.4
NP-2			06/04/07 41.2	08/13/07 41.7	11/06/07 41.7	01/11/08 43.5	04/17/08 40	07/11/08 40.5	10/09/08 39.7	02/09/09 42.4	04/24/09 32.1	09/17/09 40	NS	NS	04/22/10 41.9	08/05/10 41.2	10/25/10 41.4	01/19/11 41.9	05/03/11 43.5	07/18/11 44.8	12/5/11 58.63	3/21/12 64.11	6/18/12 64.9	8/15/2012 65.72

NS = No sample

Q1 = First Quarter Q2 = Second Quarter

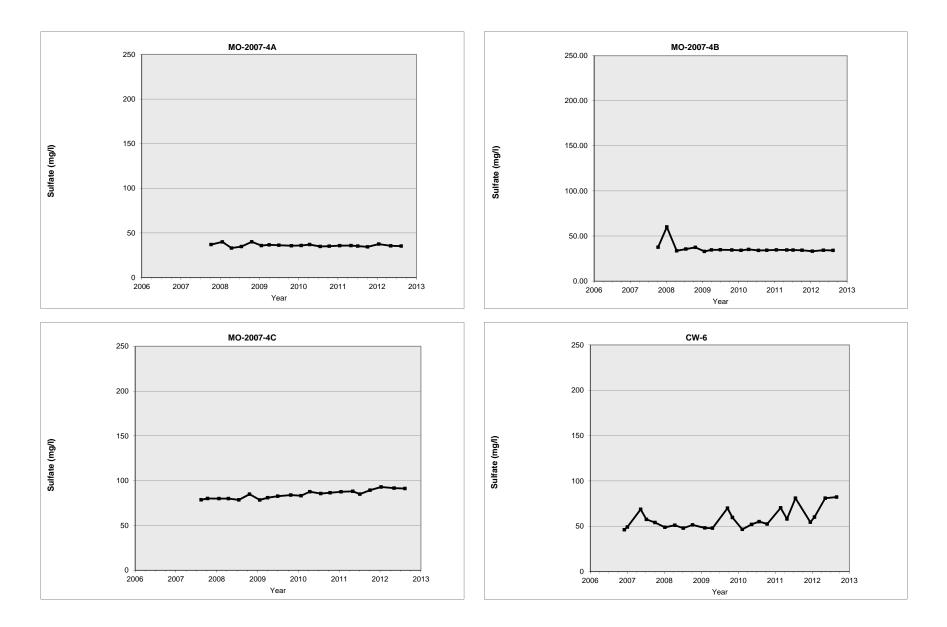
Q2 = Second Quarter

Q3 = Third Quarter

Q4 = Fourth Quarter

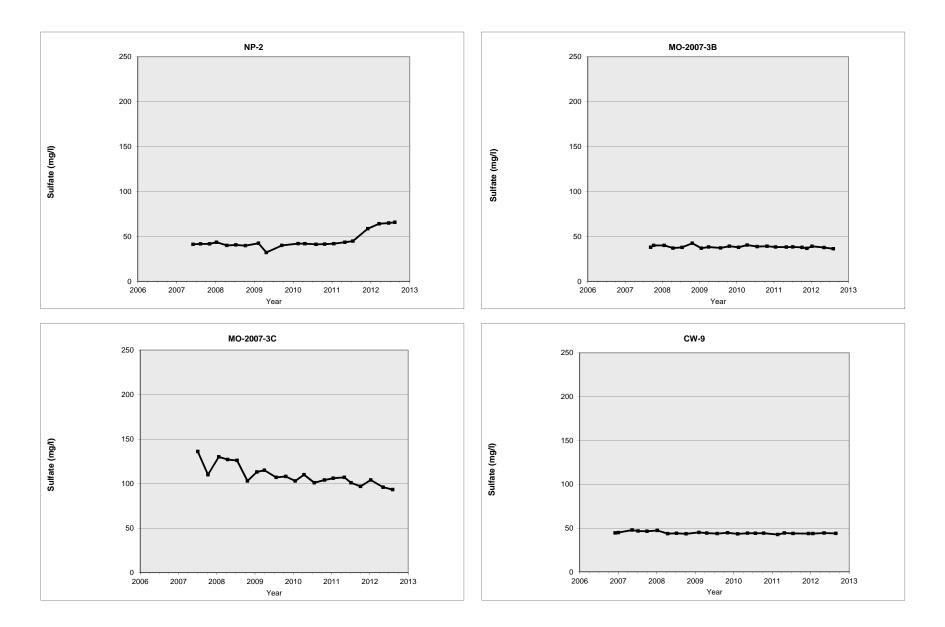


FIGURE C.1 SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2007-4A, MO-2007-4B, MO-2007-4C, AND CW-6



CLEAR CREEK CREEK ASSOCIATES V:Projects/G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q2 and Q3 Semiannual Report\2012 Q2 and Q3 SA Sierrita Appendix C

FIGURE C.2 SULFATE CONCENTRATION OVER TIME FOR WELLS NP-2, MO-2007-3B, MO-2007-3C, AND CW-9



CLEAR CREEK CREEK ASSOCIATES V:Projects/G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q2 and Q3 Semiannual Report\2012 Q2 and Q3 SA Sierrita Appendix C

FIGURE C.3 SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2009-1 AND CW-10

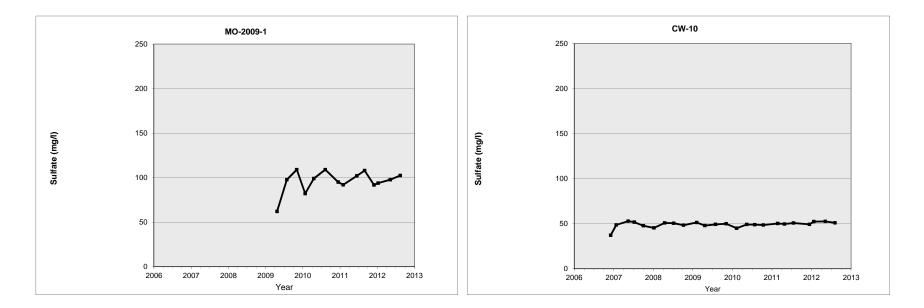
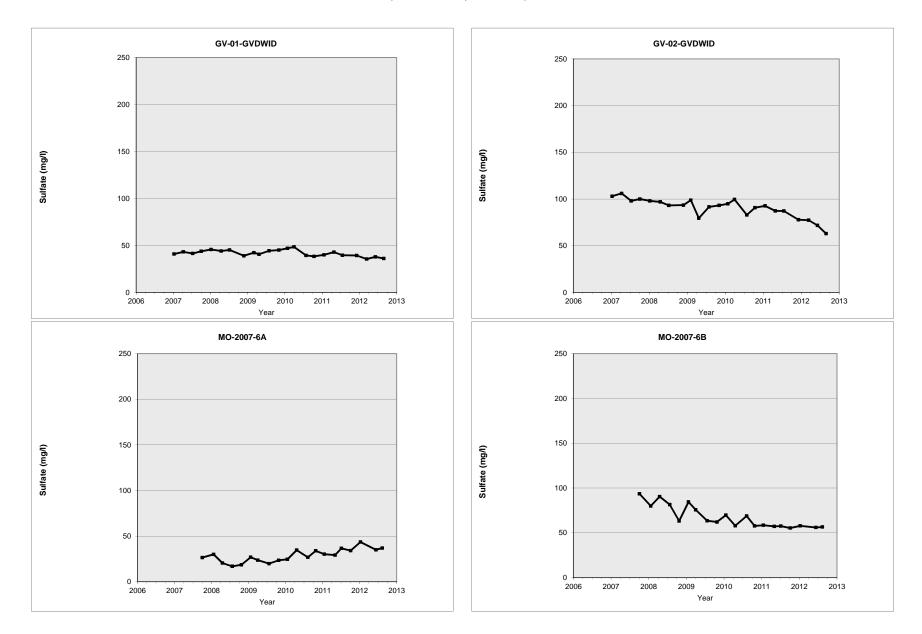
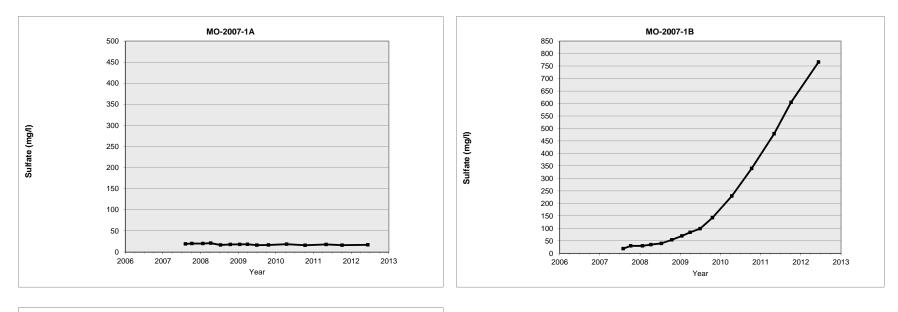


FIGURE C.4 SULFATE CONCENTRATION OVER TIME FOR WELLS GV-01-GVDWID, GV-02-GVDWID, MO-2007-6A, AND MO-2007-6B



CLEAR CREEK CREEK ASSOCIATES V:Projects/G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q2 and Q3 Semiannual Report\2012 Q2 and Q3 SA Sierrita Appendix C

FIGURE C.5 SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2007-1A, MO-2007-1B, AND MO-2007-1C



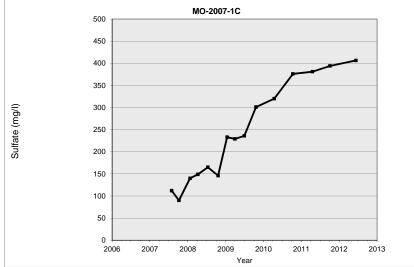
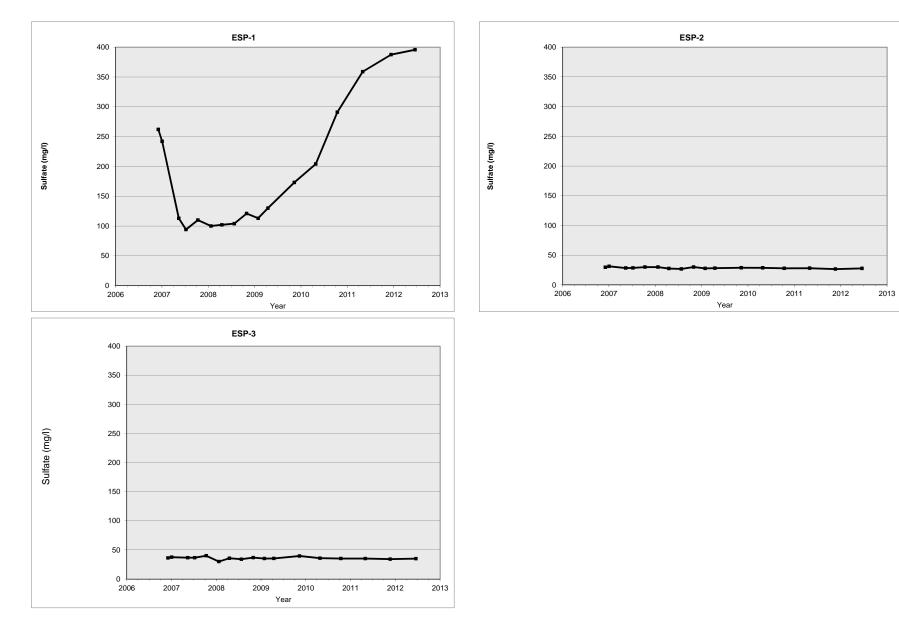




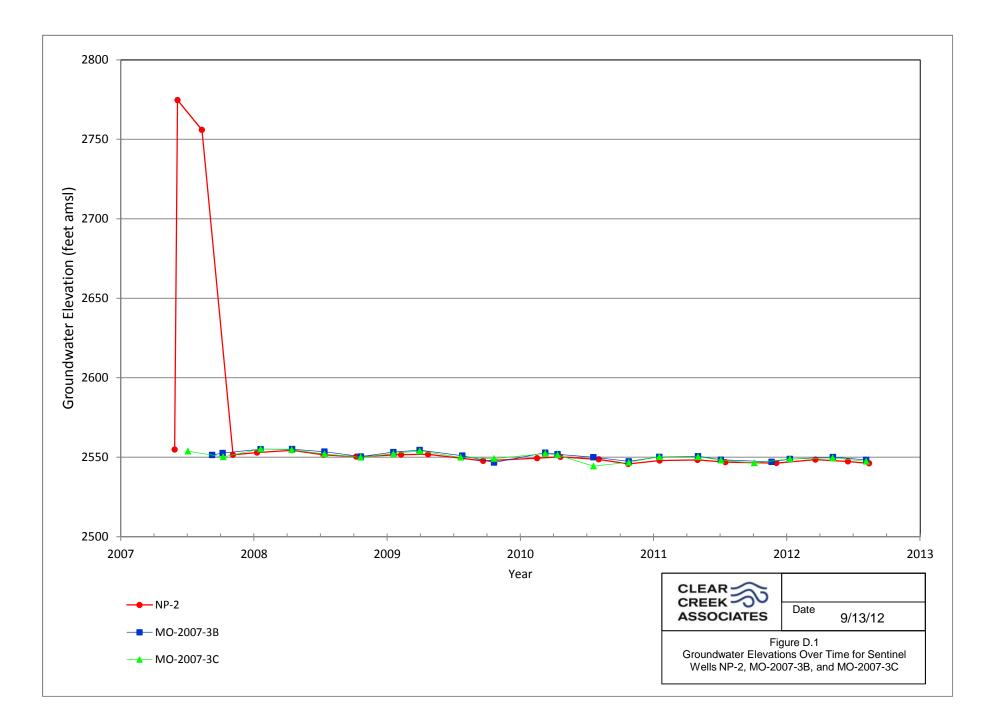
FIGURE C.6 SULFATE CONCENTRATION OVER TIME FOR WELLS ESP-1, ESP-2, AND ESP-3

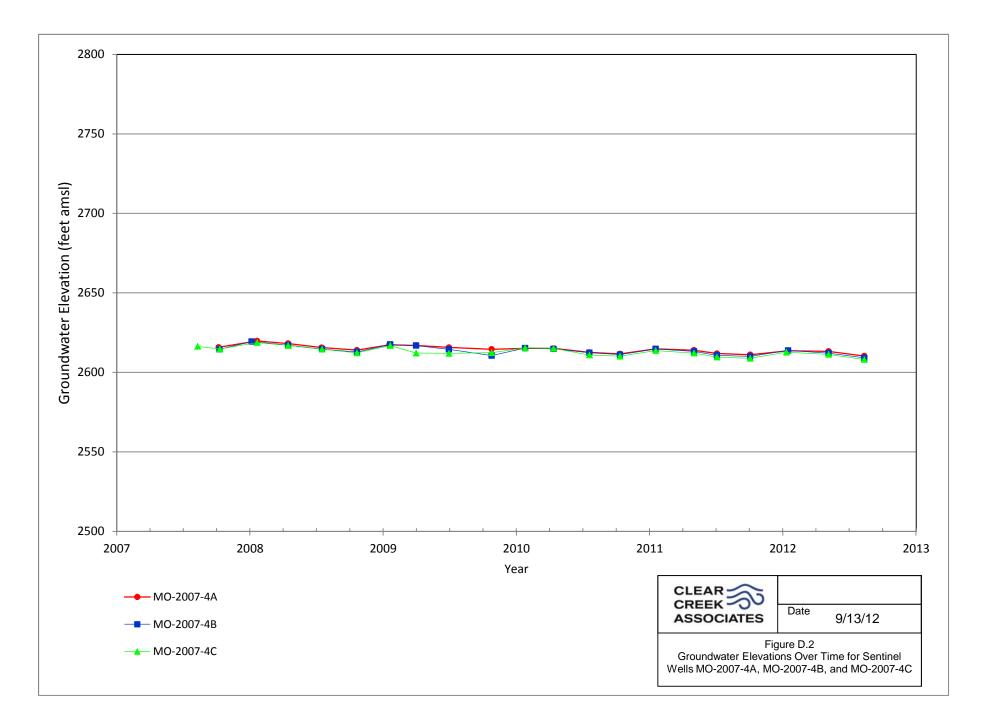


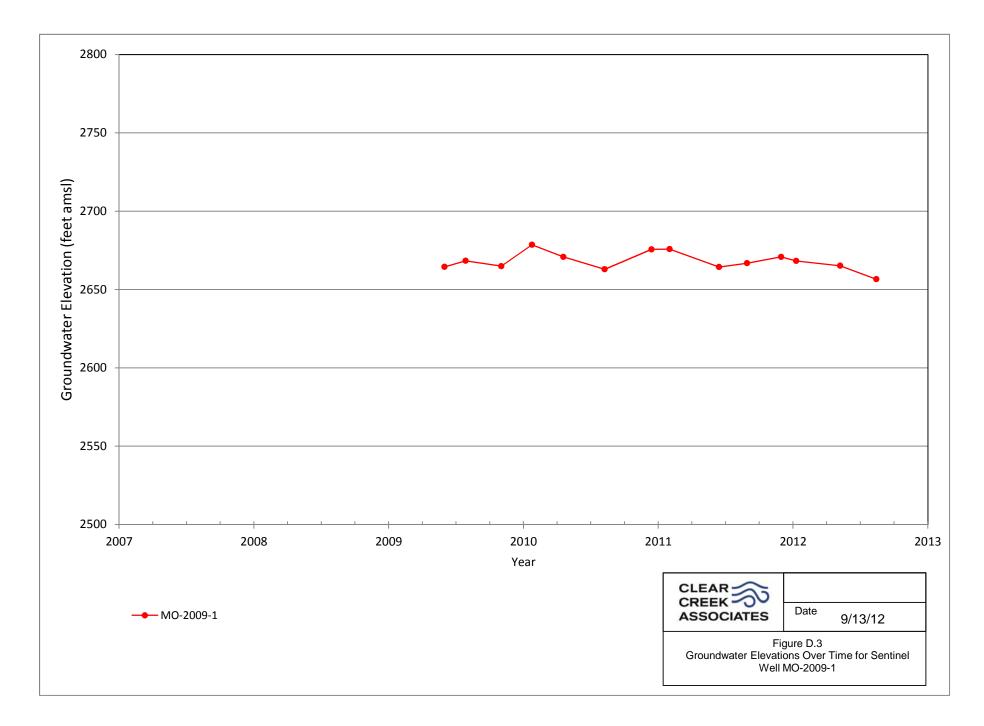
CLEAR CREEK CREEK ASSOCIATES V:Projects/G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q2 and Q3 Semiannual Report\2012 Q2 and Q3 SA Sierrita Appendix C

APPENDIX D

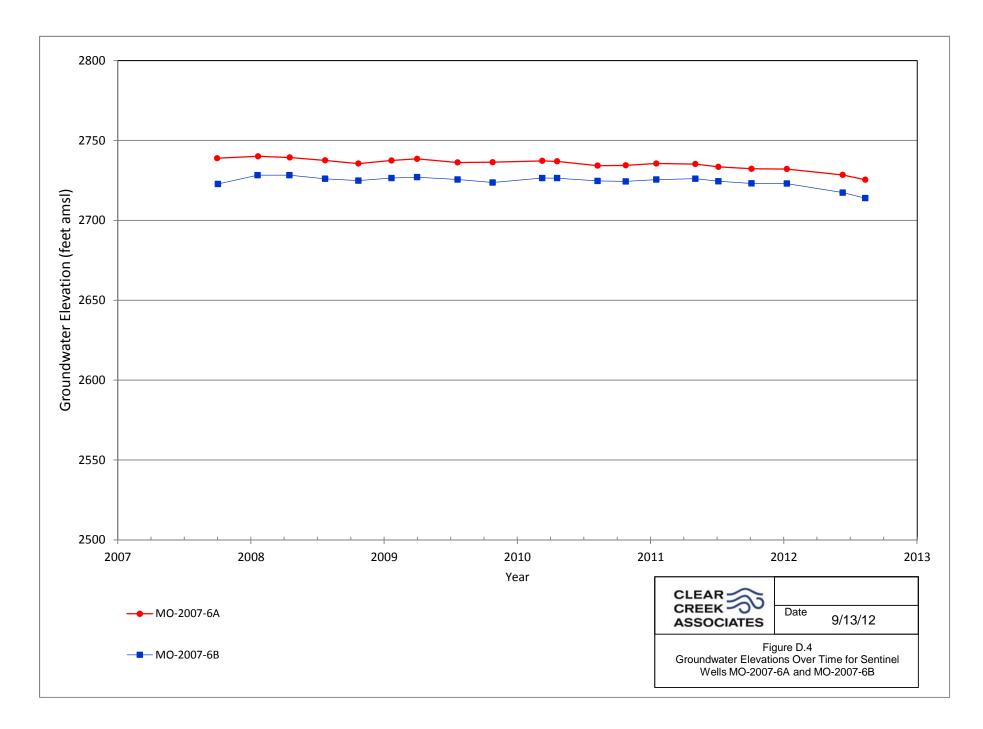
TIME SERIES GRAPHS OF GROUNDWATER ELEVATION







V:\Projects\G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q2 and Q3 Semiannual Report\GW Elevation Time Series for Sentinel Wells





Analytical Report

April 27, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS00000129 ACZ Project ID: L94048

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 13, 2012. This project has been assigned to ACZ's project number, L94048. 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 L94048. 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 May 27, 2012. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years.

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

Tony Antalek has reviewed and approved this report.





ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

Project ID:	ZS00000129
Sample ID:	HW-5-

ACZ Sample ID: **L94048-01** Date Sampled: 04/10/12 14:30 Date Received: 04/13/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	21.9		mg/L	0.4	2	04/20/12 23:58	B pjb



ACZ Sample ID: L94048-02

FMI Gold & Copper - Sierrita

Project ID:	ZS00000129	Date Sampled:	04/10/12 15:02
Sample ID:	HW-5-IN-S-	Date Received:	04/13/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	33.3		mg/L	0.6	3	04/21/12 0:00	pjb



ACZ Sample ID: L94048-03

FMI Gold & Copper - Sierrita

Project ID:	ZS00000129	Date Sampled:	04/10/12 14:46
Sample ID:	HW-5-IN-N-	Date Received:	04/13/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.35		mg/L	0.02	0.1	04/21/12 0:01	pjb



FMI Gold & Copper - Sierrita

Project ID:	ZS00000129
Sample ID:	HW-5-DITCH

ACZ Sample ID: **L94048-04** Date Sampled: 04/10/12 14:20 Date Received: 04/13/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	4.47		mg/L	0.06	0.3	04/21/12 0:02	pjb

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FMI Gold & Copper - Sierrita

Project ID:	ZS00000129
Sample ID:	CAT POND #3

ACZ Sample ID: L94048-05 Date Sampled: 04/10/12 15:29 Date Received: 04/13/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	16.2		mg/L	0.3	2	04/21/12 0:03	pjb



Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS00000129
Sample ID:	MH-19

ACZ Sample ID: L94048-06 Date Sampled: 04/12/12 11:40 Date Received: 04/13/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	04/25/12 21:18	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0053		mg/L	0.0005	0.002	04/25/12 21:18	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	04/26/12 11:56	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	04/25/12 21:18	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	04/18/12 19:24	aeb
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	04/18/12 19:24	aeb
Copper, dissolved	M200.7 ICP		U *	mg/L	0.01	0.05	04/18/12 19:24	aeb
Lead, dissolved	M200.8 ICP-MS	0.0003	В	mg/L	0.0001	0.0005	04/25/12 21:18	msh
Magnesium, dissolved	M200.7 ICP	45.6		mg/L	0.2	1	04/18/12 19:24	aeb
Molybdenum, dissolve	d M200.7 ICP	0.03	В	mg/L	0.01	0.05	04/18/12 19:24	aeb
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	04/25/12 21:18	msh
Selenium, dissolved	M200.8 ICP-MS	0.0049		mg/L	0.0001	0.0003	04/25/12 21:18	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	04/25/12 21:18	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5	В *	mg/L	0.1	0.5	04/17/12 20:40	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	9.5		mg/L	0.1	0.5	04/21/12 0:08	pjb
Residue, Filterable (TDS) @180C	SM2540C	1680		mg/L	10	20	04/16/12 11:01	las
Sulfate	D516-02 - Turbidimetric	720	*	mg/L	20	100	04/24/12 10:10	сср



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Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences								
(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, Third Edition with Update III, December 1996.								
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).								
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.								

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS00000129

ACZ Project ID: L94048

Antimony, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.02		.02048	mg/L	102.4	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0012	0.0012			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.01		.00942	mg/L	94.2	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.01	U	.01125	mg/L	112.5	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.01	U	.01033	mg/L	103.3	70	130	8.53	20	
Arsenic, dissolv	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.05208	mg/L	104.2	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0015	0.0015			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.05096	mg/L	101.8	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	.0053	.05938	mg/L	108.1	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	.0053	.05817	mg/L	105.6	70	130	2.06	20	
Beryllium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321708													
WG321708ICV	ICV	04/26/12 11:34	MS120416-2	.05		.05299	mg/L	106	90	110			
WG321708ICB	ICB	04/26/12 11:38				U	mg/L		-0.0003	0.0003			
WG321708LFB	LFB	04/26/12 11:43	MS120327-3	.0501		.04625	mg/L	92.3	85	115			
L94112-03AS	AS	04/26/12 12:40	MS120327-3	.0501	U	.04725	mg/L	94.3	70	130			
L94112-03ASD	ASD	04/26/12 12:44	MS120327-3	.0501	U	.04793	mg/L	95.7	70	130	1.43	20	
Cadmium, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.04991	mg/L	99.8	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.0501		.04742	mg/L	94.7	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.0501	U	.04757	mg/L	95	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.0501	U	.04619	mg/L	92.2	70	130	2.94	20	
Chromium, diss	olved		M200.7 IC	;P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		1.981	mg/L	99.1	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.516	mg/L	103.2	85	115			
W GOZ IZOZEI D													
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	U	.503	mg/L	100.6	85	115			

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS00000129

ACZ Project ID: L94048

Cobalt, dissolv	ed		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		1.997	mg/L	99.9	95	105			
WG321202ICB	ICB	04/18/12 17:45		-		U	mg/L	00.0	-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.505	mg/L	101	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	.07	.565	mg/L	99	85	115			
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	.07	.561	mg/L	98.2	85	115	0.71	20	
Copper, dissolv	ved		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		2.003	mg/L	100.2	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	ll120409-2	.5		.52	mg/L	104	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	9.83	10.06	mg/L	46	85	115			M3
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	9.83	10.01	mg/L	36	85	115	0.5	20	M3
Fluoride	Fluoride SM4500F-C												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321183													
WG321183ICV	ICV	04/17/12 10:02	WC120412-	2.002		1.91	mg/L	95.4	95	105			
WG321183ICB	ICB	04/17/12 10:09				U	mg/L		-0.3	0.3			
WG321187													
WG321187LFB1	LFB	04/17/12 13:51	WC120124-	5		5.03	mg/L	100.6	90	110			
WG321187LFB2	LFB	04/17/12 17:31	WC120124-	5		4.95	mg/L	99	90	110			
L94046-06AS	AS	04/17/12 19:47	WC120124-	5	.1	5.15	mg/L	101	90	110			
L94046-06DUP	DUP	04/17/12 19:55			.1	.11	mg/L				9.5	20	RA
Lead, dissolved	1		M200.8 IC	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.04833	mg/L	96.7	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.04734	mg/L	94.6	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	.0003	.05289	mg/L	105.1	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	.0003	.05069	mg/L	100.7	70	130	4.25	20	
Magnesium, dis	solved		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	100		102.38	mg/L	102.4	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.6	0.6			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	50.0051		53.03	mg/L	106	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	50.0051	47	100.2	mg/L	106.4	85	115			
		04/10/10 10-50	11400400 0	E0 00E1	47	00.65	···· //	105.2	05	115	0 55	00	

99.65 mg/L

105.3

85

115 0.55 20

50.0051

47

L94029-04ASD

ASD 04/18/12 18:50 II120409-2

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS00000129

ACZ Project ID: L94048

Molybdenum, di	issolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		2.026	mg/L	101.3	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.526	mg/L	105.2	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	U	.521	mg/L	104.2	85	115			
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	U	.514	mg/L	102.8	85	115	1.35	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.05133	mg/L	102.7	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0018	0.0018			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.04794	mg/L	95.8	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	U	.04564	mg/L	91.2	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	U	.04479	mg/L	89.5	70	130	1.88	20	
Nitrate/Nitrite as	s N		M353.2 - I	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321438													
WG321438ICV	ICV	04/20/12 18:50	WI120405-3	2.416		2.365	mg/L	97.9	90	110			
WG321438ICB	ICB	04/20/12 18:51				U	mg/L		-0.06	0.06			
WG321443													
WG321443LFB1	LFB	04/20/12 23:10	WI120211-3	2		2.079	mg/L	104	90	110			
L94046-05AS	AS	04/20/12 23:29	WI120211-3	2	.27	2.435	mg/L	108.3	90	110			
L94046-06DUP	DUP	04/20/12 23:31			.26	.269	mg/L				3.4	20	
WG321443LFB2	LFB	04/20/12 23:44	WI120211-3	2		2.046	mg/L	102.3	90	110			
L94048-05AS	AS	04/21/12 0:07	WI120211-3	30	16.2	48.19	mg/L	106.6	90	110			
L94048-06DUP	DUP	04/21/12 0:09			9.5	9.47	mg/L				0.3	20	
Residue, Filtera	ble (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321122													
		04/16/12 10:45							20	20			
WG321122PBW	PBW	04/16/12 10:45	DCN20018	260		U 254	mg/L	07.7	-20	20			
WG321122LCSW	LCSW	04/16/12 10:46	PCN39018	260	100	254	mg/L	97.7	80	120	2.4	20	
L94061-03DUP	DUP	04/16/12 11:14			180	174	mg/L				3.4	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.05215	mg/L	104.3	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.0492	mg/L	98.3	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	.0049	.06085	mg/L	111.8	70	130			

L94048-06ASD

ASD

04/25/12 21:35 MS120327-3

.05005

.0049

.057

mg/L

104.1

70

130

20

6.53

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS00000129

ACZ Project ID: L94048

Sulfate		D516-02 - Turbidimetric											
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321546													
WG321546ICB	ICB	04/24/12 9:01				U	mg/L		-3	3			
WG321546ICV	ICV	04/24/12 9:01	WI120423-8	20		18.9	mg/L	94.5	90	110			
WG321546LFB	LFB	04/24/12 9:55	WI111111-3	10.03		9.8	mg/L	97.7	90	110			
L94049-01AS	AS	04/24/12 10:47	SO4TURB5	10	89	97.1	mg/L	81	90	110			M
L94048-06DUP	DUP	04/24/12 11:30			720	714	mg/L				0.8	20	
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.04929	mg/L	98.6	90	110			
WG321579ICB	ICB	04/25/12 19:52				.00011	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.04731	mg/L	94.5	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	U	.05294	mg/L	105.8	70	130			
							-						



(800) 334-5493

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: L94048

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94048-06	WG321202	Copper, dissolved	M200.7 ICP	М3	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.
	WG321187	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG321546	Sulfate	D516-02 - Turbidimetric	М3	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.



ACZ Project ID: L94048

No certification qualifiers associated with this analysis

AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita ZS00000129	ACZ Proje Date Rec		L94048 04/13/2012 10:24	
	Receive	ed By:		ksj
	Date P	rinted:	4/	16/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
2442	2.8	16

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS00000129

Sample Receipt

ACZ Project ID:	L94048
Date Received:	04/13/2012 10:24
Received By:	ksj
Date Printed:	4/16/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94048-01	HW-5-				Y							
L94048-02	HW-5-IN-S-				Y							
L94048-03	HW-5-IN-N-				Y							
L94048-04	HW-5-DITCH				Y							
L94048-05	CAT POND #3				Y							
L94048-06	MH-19				Y							
Sample Container Preservation Legend												

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
В	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
0	Raw/Sulfuric	ORANGE	pH must be < 2
Р	Raw/NaOH	PURPLE	pH must be > 12 *
Т	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Υ	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

c	ame: <u>Jon Anderson</u> company: <u>Freeport - ille M</u> -mail: <u>con a them - and</u>	n Iorain Sion	ita Inc.		Addres	Scen	Valley	, Az	Mine. 2 856. 2714		
Z	lame: <u>Ben Daj</u> company: <u>Clear Creek</u>				E-mail Teleph	: bal a	aig nea 520≁	<u>4</u> C c 677 -	Barcreel 3222	s esseciates	⁻ 20
					Addres	ss.					
- F	lame:			ŀ					<u> </u>		
-	Company:	. <u></u>		-	Teleph		<u></u>				
	E- mail: f sample(s) received past holding	time (UT) of if	incufficient						YES		
a If	Sample(s) received past nording inalysis before expiration, shall A "NO" then AC2 will contact client for further instruc- indicated, AC2 will proceed with the requested anal	CZ proceed will	h requested r 1901	i short H	IT anal	lyses?			NO		
A	Are samples for SDWA Complian	ce Monitoring?			Yes		No				
	f yes, please include state forms.			PQL fo	r Color						
S	Sampler's Name: Robert Carpor	Sampler's site	Information		State	H2.	Zip code	9504	Time Zone		
:	= 1000000000000000000000000000000000000					1					
	Quote #:		<u> </u>		ers						
F	Project/PO #: 2500	760 10	9		aine	<i>ι</i> 14	<u></u>				
	Reporting state for compliance testi				Containers	ЧV	te				
- F	Check box if samples include NRC		1?		of C	Month	Quarter ly				
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ſ	1+41-5-	4-10-12	14:30	Gω		X					
ŀ	HW-5-IN-5-	4-10-12	15:02	Gud	1	X					
⊦		4-10-12	14:46	6w	1	X					
ŀ	HW-5-IN-N-	4-10-12	14:20	6w	1	X					
ŀ	HW-5-Ditch		15:29		$\frac{1}{1}$	X					
ŀ	CAT POND #3	4-10-12		GW	3		X		<u>{</u> − † −	++	
ŀ	MH-19	4-12-12	11:40		<u> -</u>				┼──┾──		
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	Robert Carper		4-13	- 13							-

FRMAD050.02.11.11

White - Return with sample. Yellow - Retain for your records.

 \mathcal{V}



Analytical Report

May 09, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001JL ACZ Project ID: L94262

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 27, 2012. This project has been assigned to ACZ's project number, L94262. 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 L94262. 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 09, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories	s, Inc.
	Steamboat Springs, CO 8	-

Project ID:	ZS000001JL
Sample ID:	PZ-8

ACZ Sample ID: **L94262-01** Date Sampled: 04/26/12 09:21 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	344.9		mg/L	5	25	05/04/12 13:31	сср

ACZ	Laboratories	s, Inc.
	Steamboat Springs, CO 8	-

FMI Gold & Copper - Sierrita		ACZ Sample ID:	L94262-02
Project ID:	ZS000001JL	Date Sampled:	04/26/12 12:07
Sample ID:	MH-30	Date Received:	04/27/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1738		mg/L	100	500	05/04/12 14:13	сср



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001JL

ACZ Project ID: L94262

Sulfate	ulfate M300.0 - Ion Chromatography												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321877													
WG321877ICV	ICV	05/03/12 14:48	WI120406-1	50.15		51.43	mg/L	102.6	90	110			
WG321877ICB	ICB	05/03/12 15:09				U	mg/L		-1.5	1.5			
WG322155													
WG322155LFB1	LFB	05/04/12 13:10	WI120312-2	30		29.93	mg/L	99.8	90	110			
L94262-01DUP	DUP	05/04/12 13:52			344.9	337.5	mg/L				2.2	20	
L94262-02AS	AS	05/04/12 14:34	WI120312-2	6000	1738	7676	mg/L	99	90	110			
WG322155LFB2	LFB	05/04/12 23:22	WI120312-2	30		29.76	mg/L	99.2	90	110			
WG322155LFB1	LFB	05/07/12 13:12	WI120312-2	30		30.22	mg/L	100.7	90	110			



(800) 334-5493

ACZ Project ID: L94262

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L94262

No certification qualifiers associated with this analysis

AGAZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita ZS000001JL	ACZ Projec Date Rece Receive	eived: 04	L94262 4/27/2012 09:47 gac		
	Date Pri	nted:	4/:	30/2012	
Receipt Verification					
		YES	NO	NA	
1) Does this project require special handling procedures such as CLP protocol?				Х	
2) Are the custody seals on the cooler intact?		Х			
3) Are the custody seals on the sample containers intact?				Х	
4) Is there a Chain of Custody or other directive shipping papers present?		Х			
5) Is the Chain of Custody complete?		Х			
6) Is the Chain of Custody in agreement with the samples received?		Х			
7) Is there enough sample for all requested analyses?		Х			
8) Are all samples within holding times for requested analyses?		Х			
9) Were all sample containers received intact?		Х			
10) Are the temperature blanks present?				Х	
11) Are the trip blanks (VOA and/or Cyanide) present?				Х	
12) Are samples requiring no headspace, headspace free?				Х	
13) Do the samples that require a Foreign Soils Permit have one?				Х	

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3162	4.7	15

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

Notes

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

FMI Gold & Copper - Sierrita

ZS000001JL

Sample Receipt

ACZ Project ID: L94262 Date Received: 04/27/2012 09:47 Received By: gac Date Printed: 4/30/2012

Sample Container Preservation

SAMPLE	CLIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94262-01	PZ-8										Х		
L94262-02	MH-30										Х		
Sample Container Preservation Legend													
Abbreviation	n Description	Contair	ner Typ	r Type Preservative/Limits									
R	Raw/Nitric	RED		p⊢	l must be	< 2							
В	Filtered/Sulfuric	BLUE		p⊢	l must be	< 2							
BK	Filtered/Nitric	BLACK		p⊢	l must be	< 2							
G	Filtered/Nitric	GREEN	I	p⊢	l must be	< 2							
0	Raw/Sulfuric	ORANG	θE	p⊢	l must be	< 2							
Р	Raw/NaOH	PURPL	E	p⊢	l must be	> 12 *							
Т	Raw/NaOH Zinc Acetate	TAN		p⊢	l must be	> 12							
Y	Raw/Sulfuric	YELLO	W	p⊢	l must be	< 2							
YG	Raw/Sulfuric	YELLO	W GLAS	SS p⊢	l must be	< 2							
N/A	No preservative needed	Not app	licable										
RAD	Gamma/Beta dose rate	Not app	licable	m	ust be < 2	250 µR/	hr						

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

				<u> </u>					
ACZ Labo	0	L94262 CHANNER CUMPTON						I	
2773 Downhill Drive Steamboat Spr	ings, CO 80487 (800) 334-	5493							
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Name: Jon Androis	ion		Addres		1 1		al Min		<i>y</i>
Company: Freepart - Mc	Mokan Inc.		(se				<u>85614</u>		
E-mail: jong than-ande	1500 C. fmicon		T <u>elep</u> t	none: 🖉	20 - :	<u>793-0</u>	2719		
Name: Boniamin J. R	higneau		E-mai	: bda	ig near	C cle	ancreekas	sociates	5.00
Name: <u>Benjamin J. C</u> Company: Clear Crea	k associates		Telepi					. <u> </u>	
		-		•					
			Addre	SS:		÷			
Name:					**				
Company: E-mail:		1	Telep	hone:					
E-mail: If sample(s) received past holding	time (HT), or if insufficien	u ntHTrem			ete		YES		_
analysis before expiration, shall A	ACZ proceed with requeste	d short	HT ana	lyses?			NO		
If 'NO" then ACZ will contact client for further instruct	ttion. If neither "YES" nor "NO" is indicate	ed. ACZ will p	roceed with	h lhe request	ed				
analyses, even if HT is expired, and data will be quali Are samples for SDWA Complian			Yes		No				
If yes, please include state forms	. Results will be reported to	o P <u>QL</u> fo	or Colo	rado.					
Sampler's Name: Kbot Cuya			State	A	Zip code		Time Zone		
$(5.23) = 1.123 \times 0.175 \times 0.175$								-	
Quote #:			ers S						
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Are any samples NRC licensab		s/No	of (1					
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	refer to ACZ's terms & cor	nditions	locate	d on the	reverse s	ide of thi	s COC.		
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L94262 Chain of Custody



Analytical Report

May 11, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L94382

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 04, 2012. This project has been assigned to ACZ's project number, L94382. 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 L94382. 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 11, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	MO-2007-2

ACZ Sample ID: L94382-01 Date Sampled: 05/02/12 13:29 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	543.5		mg/L	5	25	05/09/12 17:28	сср



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (1 (800) 334-5493

Inorganic QC Summary

ZS000001Z9

FMI Gold & Copper - Sierrita

Project ID:

ACZ Project ID: L94382

Sulfate			M300.0 - I	on Chrom	natography	/							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321877													
WG321877ICV	ICV	05/03/12 14:48	WI120406-1	50.15		51.43	mg/L	102.6	90	110			
WG321877ICB	ICB	05/03/12 15:09				U	mg/L		-1.5	1.5			
WG322362													
WG322362LFB	LFB	05/09/12 16:24	WI120312-2	30		30.02	mg/L	100.1	90	110			
L94300-02DUP	DUP	05/09/12 17:06			116.87	114.99	mg/L				1.6	20	
L94382-01AS	AS	05/09/12 17:49	WI120312-2	300	543.5	836.4	mg/L	97.6	90	110			



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ACZ Project ID: L94382

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L94382

No certification qualifiers associated with this analysis

AGE Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita ZS000001Z9	ACZ Proje Date Rec		5/04/201	L94382 12 09:00
	Receive			ksj
	Date Pr	inted:	5	5/7/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?		L		Х
12) Are samples requiring no headspace, headspace free?		L		Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
3049	5.9	15

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L94382
Date Received:	05/04/2012 09:00
Received By:	ksj
Date Printed:	5/7/2012

Sample Container Preservation

SAMPLE	CLIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94382-01	MO-2007-2										Х		
Sample C	ontainer Preservation Leg	end											
Abbreviatio	n Description	Contai	ner Type	e Pr	eservativ	/e/Limit	s						
R	Raw/Nitric	RED		рH	must be	< 2							
В	Filtered/Sulfuric	BLUE		pН	must be	< 2							
BK	Filtered/Nitric	BLACK		рH	must be	< 2							
G	Filtered/Nitric	GREEN	l	pН	must be	< 2							
0	Raw/Sulfuric	ORANO	θE	pН	must be	< 2							
Р	Raw/NaOH	PURPL	E	pН	must be	> 12 *							
Т	Raw/NaOH Zinc Acetate	TAN		рH	must be	> 12							
Y	Raw/Sulfuric	YELLO	W	рH	must be	< 2							
YG	Raw/Sulfuric	YELLO	W GLAS	SS pH	must be	< 2							
N/A	No preservative needed	Not app	licable										
RAD	Gamma/Beta dose rate	Not app	licable	mu	ust be < 2	250 µR/ł	٦r						

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

	ACZ Labor			42	38	$\tilde{\mathbf{x}}$	CH	AIN of	CUSTO)()Y		
	2773 Downhill Drive Steamboat Sp	rings, CO 80487 (800) 334-	2493	ľ								
	Name: Jon Anderson Company: Freeport-McMoRan Sierrita Inc.			Addro		0 W Duval	Mine Roa	d				
				Address: 6200 W. Duval Mine Road Green Valley, AZ 85614								
				Toloni		520-393-271						
		E-mail:jonathan_anderson@fmi.com										
	Copy of Report to:											
	Name: Ben Daigneau		4			neau@clear		ciates.com				
	Company: Clear Creek Associa	ates]	Telepi	none: S	520-622-322	2					
	Inverce to											
	Name:			Address:								
	Company:				_							
	E-mail:											
	If sample(s) received past holding	g time (HT), or if insufficier	- nt HT rer	nains to	o compl	lete		YES				
	analysis before expiration, shall a	ACZ proceed with requeste	d short	HT ana	lyses?	i ∩ "		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 CO DW Complia							YES				
	If yes, please include state forms		to PQL.					NO	X			
	PROJECT INFORMATION		_			rdes REQUÉ	STED <i>(alla</i>	ch list er us	а физік пыл	der t		
	Quote #:				1375							
	Project/PO #: ZS000001Z9			of Containers	LEPA							
	Reporting state for compliance testing:			ntai	300 or							
	Sampler's Name: Robert Carper			ပိ	by EPA 300							
	Are any samples NRC licensat	le material? Yes No		- -	₽ ₽							
	SAMPLE IDENTIFICATION	DATE:TIME	Matrix		Š				┝─┼─			
	MO-2007-2	5/2/12 13:29	GW	1	×				┝╌┼─╴			
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4382 Chain ©										<u></u>		
82												
	Matrix SW (Surface Water) · GW	V (Ground Water) · WW (Waste	Water) · D	W (Drink	ing Wate	er) · SL (Sludge)	· SO (Soil) · (OL (Oil) · Othe	r (Specify)			
ن	REMARKS											
		1000 7995										
	UPS Tracking #1Z 867 7E4 2	23 1000 7885										
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		ase refer to ACZ's terms &		ons Ioc		n the reverse RECEIVED B			DATE: F	iML		
	RELINQUISHED B*								0900			
	Robert Carper	5/2/12 M 14	:00		nu	1 5/4	112	<u> </u>	0100			
		5 3 12						 				
		L										



Analytical Report

May 29, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L94511

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 11, 2012. This project has been assigned to ACZ's project number, L94511. 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 L94511. 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 29, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	MO-2007-4A

ACZ Sample ID: **L94511-01** Date Sampled: 05/07/12 09:32 Date Received: 05/11/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	35.62		mg/L	0.5	2.5	05/18/12 9:08	сср

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	MO-2007-4C

ACZ Sample ID: L94511-02 Date Sampled: 05/07/12 11:59 Date Received: 05/11/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.70		mg/L	0.5	2.5	05/18/12 9:30	сср

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	MO-2007-4B

ACZ Sample ID: L94511-03 Date Sampled: 05/07/12 13:47 Date Received: 05/11/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.25		mg/L	0.5	2.5	05/18/12 9:51	сср

ACZ	Laboratories	s, Inc.
2773 Downhill Drive	Steamboat Springs, CO 8	80487 (800) 334-5493

Project ID:	ZS000001Z9				
Sample ID:	MO-2007-3C				

ACZ Sample ID: L94511-04 Date Sampled: 05/07/12 17:14 Date Received: 05/11/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	95.99		mg/L	2.5	12.5	05/18/12 10:12	2 сср

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9				
Sample ID:	MO-2007-3B				

ACZ Sample ID: L94511-05 Date Sampled: 05/08/12 10:21 Date Received: 05/11/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.64		mg/L	0.5	2.5	05/18/12 10:33	3 сср

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

ACZ Sample ID: L94511-06

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9	Date Sampled:	05/09/12 09:02
Sample ID:	CW-10	Date Received:	05/11/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	52.51		mg/L	0.5	2.5	05/26/12 1:52	сср

ACZ	Laboratorie	s, Inc.
	Steamboat Springs, CO	•

FMI Gold & Cop	per - Sierrita	ACZ Sample ID:	L94511-07
Project ID:	ZS000001Z9	Date Sampled:	05/09/12 10:00
Sample ID:	CW-6	Date Received:	05/11/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	80.99		mg/L	2.5	12.5	05/26/12 2:34	сср

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

ACZ Sample ID: L94511-08

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9	Date Sampled:	05/09/12 10:58
Sample ID:	CW-9	Date Received:	05/11/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	44.39		mg/L	0.5	2.5	05/26/12 3:16	сср

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

ACZ Sample ID: L94511-09

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9	Date Sampled:	05/09/12 14:57
Sample ID:	MO-2009-1	Date Received:	05/11/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	97.69		mg/L	0.5	2.5	05/26/12 3:37	сср



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L94511

Sulfate			M300.0 - I	on Chrom	natography	/							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322421													
WG322421ICV	ICV	05/11/12 14:11	WI120406-1	50.15		51.23	mg/L	102.2	90	110			
WG322421ICB	ICB	05/11/12 14:33				U	mg/L		-1.5	1.5			
WG322819													
WG322819LFB	LFB	05/18/12 0:42	WI120312-2	30		29.78	mg/L	99.3	90	110			
L94459-14DUP	DUP	05/18/12 6:20			10.91	10.9	mg/L				0.1	20	
L94459-15AS	AS	05/18/12 7:02	WI120312-2	30	9.79	40.11	mg/L	101.1	90	110			
WG323366													
WG323366LFB	LFB	05/26/12 1:31	WI120312-2	30		29.43	mg/L	98.1	90	110			
L94511-06DUP	DUP	05/26/12 2:13			52.51	52.54	mg/L				0.1	20	
L94511-07AS	AS	05/26/12 2:55	WI120312-2	150	80.99	228.56	mg/L	98.4	90	110			



Inorganic Extended Qualifier Report

ACZ Project ID: L94511

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L94511

No certification qualifiers associated with this analysis

AGE Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita ZS000001Z9	ACZ Proje Date Rece			L94511 2 10:05
	Receive	ed By:		ksj
	Date Pr	inted:	5/	14/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
3283	4.5	13

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L94511
Date Received:	05/11/2012 10:05
Received By:	ksj
Date Printed:	5/14/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94511-01	MO-2007-4A									Х		
L94511-02	MO-2007-4C									Х		
L94511-03	MO-2007-4B									Х		
L94511-04	MO-2007-3C									Х		
L94511-05	MO-2007-3B									Х		
L94511-06	CW-10									Х		
L94511-07	CW-6									Х		
L94511-08	CW-9									Х		
L94511-09	MO-2009-1									Х		
Sample Co	ontainer Preservation Lege	end										
Abbreviatio	n Description	Container Type	n Dr		(a/I)	to						
	Becchiption	oomanier ryp	5 FI	eservativ	ve/Limi	15						
R	Raw/Nitric	RED		eservative must be		15						
R B			p⊦		< 2	15						
	Raw/Nitric	RED	p⊢ p⊦	I must be	e < 2 e < 2	15						
В	Raw/Nitric Filtered/Sulfuric	RED BLUE	p⊢ p⊢ p⊦	I must be I must be	< 2 < 2 < 2	15						
B BK	Raw/Nitric Filtered/Sulfuric Filtered/Nitric	RED BLUE BLACK	р⊢ р⊢ р⊢	I must be I must be I must be	< 2 < 2 < 2 < 2 < 2	15						
B BK G	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric	RED BLUE BLACK GREEN	p⊢ p⊢ p⊢ p⊢	I must be I must be I must be I must be	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	15						
B BK G O	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric Raw/Sulfuric	RED BLUE BLACK GREEN ORANGE	p⊢ p⊢ p⊢ p⊢	I must be I must be I must be I must be I must be	<pre>< 2 < 2</pre>	15						
B BK G O P	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric Raw/Sulfuric Raw/NaOH	RED BLUE BLACK GREEN ORANGE PURPLE	p⊢ p⊢ p⊢ p⊢ p⊢	I must be I must be I must be I must be I must be I must be	<pre>< 2 < 2</pre>	15						
B BK G O P T	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric Raw/Sulfuric Raw/NaOH Raw/NaOH Zinc Acetate	RED BLUE BLACK GREEN ORANGE PURPLE TAN	p⊢ p⊢ p⊢ p⊢ p⊢	I must be I must be I must be I must be I must be I must be I must be	<pre>< 2 < 2</pre>	15						

must be < 250 µR/hr

Not applicable

Not applicable

* pH check performed by analyst prior to sample preparation

No preservative needed

Gamma/Beta dose rate

Sample IDs Reviewed By: ksj

N/A

RAD

analysis before expiration, s If "NO" then ACZ will contac	n@fmi.com ssociates olding time (HT), or if insuffi shall ACZ proceed with requ ct client for further instructio ed with the requested analys mpliance Monitoring?	icient HT rem ested short H on. If neither	Teleph E-mail Teleph Addres Teleph ains to 1T anal "YES"	hone: 520 I: bdaigne hone: 520 ss: hone: complete	Valley, A)-393-271 eau@clear)-622-322	AZ 8561 4 creekas	4	s.com		
E-mail: jonathan_anderson Copy of Report to Name: Ben Daigneau Company: Clear Creek As Prooce to: Name: Company: E-mail: If sample(s) received past he analysis before expiration, s If "NO" then ACZ will contact is indicated, ACZ will procest Are samples for CO DW Cor- If yes, please include state f	n@fmi.com ssociates olding time (HT), or if insuffi shall ACZ proceed with requ ct client for further instructio ed with the requested analys mpliance Monitoring?	icient HT rem ested short H on. If neither	E-mail Teleph Addres Teleph ains to 1T anal "YES"	hone: 520 I: bdaigne hone: 520 ss: hone: complete)-393-271 eau@clear)-622-322	4 creekas		s.com		
Copy of Report to Name: Ben Daigneau Company: Clear Creek As Invoice 10: Name: Company: E-mail: If sample(s) received past he analysis before expiration, s If "NO" then ACZ will contact is indicated, ACZ will proces Are samples for CO DW Cor If yes, please include state f	ssociates folding time (HT), or if insuffi shall ACZ proceed with requ ct client for further instructio ed with the requested analys mpliance Monitoring?	icient HT rem ested short H on. If neither	E-mail Teleph Addres Teleph ains to 1T anal "YES"	l: bdaigne hone: 520 ss: hone: complete	eau@clear 0-622-322	creekas	sociate	s.com		
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Invoice to: Name: Company: E-mail: If sample(s) received past he analysis before expiration, s If "NO" then ACZ will contac is indicated, ACZ will proce Are samples for CO DW Cor If yes, please include state f	olding time (HT), or if insuffi shall ACZ proceed with requ ct client for further instruction ed with the requested analyst mpliance Monitoring?	icient HT rem ested short H	Addre Teleph ains to IT anal "YES"	ss: hone: o complete		2				
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If yes, please include state f				pireu, ana	Udla Hinis	le quan	ieu.	YES		_
	onna. Readita will be report	ted to PQL.					·	NO	×	
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Quote #:				375						-
Project/PO #: ZS0000012	Z9		of Containers	EPA					1	
Reporting state for complia		ntaiı	300 or							
Sampler's Name:			Co Co	EPA 3	1					
Are any samples NRC lice	ensable material? Yes No		# of	≧						
SAMPLE IDENTIFICATI	ION DATE:///ME	Matrix		SO4						
MO-2007-4A	5/7/12:0932	GW	1	×						
MO-2007-4C	5/7/12 : 1159	GW	1	×						
MO-2007-4B	5/7/12 : 1347	GW	1	×						
MO-2007-3C	5/7/12 : 1714	GW	1	×						
MO-2007-3B	5/8/12 : 1021	GW	1	×						
CW-10	5/9/12 : 0902	GW	1	×						
CW-6	5/9/12 : 1000	GW	1	×						
CW-9	5/9/12 : 1058	GW	1	×						
MO-2009-1	5/9/12 : 1457	GW	1	X						
				^						

FRMAD050.01.15.09



Analytical Report

May 31, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L94664

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 18, 2012. This project has been assigned to ACZ's project number, L94664. 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 L94664. 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 30, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories	s, Inc.
	Steamboat Springs, CO 8	-

Project ID:	ZS000001Z9
Sample ID:	TMM-1

ACZ Sample ID: **L94664-01** Date Sampled: 05/15/12 10:37 Date Received: 05/18/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	7.93		mg/L	0.5	2.5	05/23/12 16:52	2 ccp



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L94664

Sulfate	M300.0 - Ion Chromatography												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322421													
WG322421ICV	ICV	05/11/12 14:11	WI120406-1	50.15		51.23	mg/L	102.2	90	110			
WG322421ICB	ICB	05/11/12 14:33				U	mg/L		-1.5	1.5			
WG323102													
WG323102LFB	LFB	05/23/12 11:36	WI120312-2	30		29.85	mg/L	99.5	90	110			
L94664-01DUP	DUP	05/23/12 17:13			7.93	7.93	mg/L				0	20	
L94668-02AS	AS	05/24/12 17:35	WI120312-2	300	365	666.1	mg/L	100.4	90	110			



(800) 334-5493

ACZ Project ID: L94664

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L94664

No certification qualifiers associated with this analysis

AGE Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Project ID:			L94664	
ZS000001Z9	Date Rec	eived: 0	05/18/2012 10:12		
	Receive	ed By:		ksj	
	Date Pr	rinted:	5/2	21/2012	
Receipt Verification					
		YES	NO	NA	
1) Does this project require special handling procedures such as CLP protocol?				Х	
2) Are the custody seals on the cooler intact?		Х			
3) Are the custody seals on the sample containers intact?				Х	
4) Is there a Chain of Custody or other directive shipping papers present?		Х			
5) Is the Chain of Custody complete?		Х			
6) Is the Chain of Custody in agreement with the samples received?		Х			
7) Is there enough sample for all requested analyses?		Х			
8) Are all samples within holding times for requested analyses?		Х			
9) Were all sample containers received intact?		Х			
10) Are the temperature blanks present?				Х	
11) Are the trip blanks (VOA and/or Cyanide) present?				Х	
12) Are samples requiring no headspace, headspace free?				Х	
13) Do the samples that require a Foreign Soils Permit have one?				Х	

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
2902	3.6	14

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L94664
Date Received:	05/18/2012 10:12
Received By:	ksj
Date Printed:	5/21/2012

Sample Container Preservation

SAMPLE C	LIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94664-01 T	MM-1										Х		
Sample Co	ntainer Preservation Leg	end											
Abbreviation	Description	Contain	ner Typ	e Pr	eservativ	/e/Limit	s						
R	Raw/Nitric	RED		p⊢	l must be	< 2							
В	Filtered/Sulfuric	BLUE		p⊢	l must be	< 2							
BK	Filtered/Nitric	BLACK		p⊢	l must be	< 2							
G	Filtered/Nitric	GREEN		p⊢	l must be	< 2							
0	Raw/Sulfuric	ORANG	Ε	p⊢	l must be	< 2							
Р	Raw/NaOH	PURPL	E	p⊢	l must be	> 12 *							
т	Raw/NaOH Zinc Acetate	TAN		p⊢	l must be	> 12							
Y	Raw/Sulfuric	YELLO	Ν	p⊢	l must be	< 2							
YG	Raw/Sulfuric	YELLO	N GLAS	SS p⊢	l must be	< 2							
N/A	No preservative needed	Not app	licable										
RAD	Gamma/Beta dose rate	Not app	licable	mu	ust be < 2	250 µR/ł	٦r						

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

Iame: Jon Anderson Address: 6200 W. Duval Mine Road Green Valley, AZ 85614	Concert the	t Springs, CO 80487 (800) 33											
company: Freeport-McMoRan Sierrita Inc. Green Valley, AZ 85614 -mai: jonathan_anderson@fmi.com Telephone: 520-393-2714 iame: Ben Daigneau E-mai: bidigneau@clearcreckassociates.com jongany: Clear Creek Associates E-mai: bidigneau@clearcreckassociates.com iame: image: image				Addre	ss: 620	0 W. I	Duval 1	Mine R	oad				
Image: jonathan_anderson@fmi.com Telephone: 520-393-2714 incompany: E-mail: bdaigneau@clearcreekassociates.com incompany: Telephone: 520-622-3322 incompany: Incompany: incompany: Incompany: incompany: Incompany: incompany: Incompany: incompany: Incompany: incompany: Incompany: incleade, ACZ vill context clears that instruction. If realines to complete YES incleade, ACZ vill context clears that instruction. If realines to complete YES incleade, ACZ vill context clears that instruction. If realines the complete that instruction. If realines that will be qualified. YES incleade, ACZ vill context clears the analyses. your If IT is expired. and data will be qualified. YES incleade, ACZ vill context clears the analyses. your If IT is expired. and data will be qualified. YES inclears the for compliance testing: YES YES inclears the for compliance testing: YES YES Sampler's NAme: DATE INFA MANEY YES inclears the for compliance testing: YES YES Sampler's NAMe: DATE INFA MANEY YES YES We a		Ran Sierrita Inc.						-					
Hame: Ben Daigneau Company: Telephone: Sompany: Address: Company: Address: Sompany: Telephone: Sompany: Address: Sompany: Telephone: Sompany: Address: Sompany: Telephone: Sompany: <td< td=""><td></td><td></td><td></td><td>Telepi</td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td></td<>				Telepi					-				
Iame: Ben Daigneau E-mail: bdaigneau(@clearcreekassociates.com Company: Clear Creek Associates Image: S20-622-3222 Image: S20-622-3222 Image: S20-622-3222 Image: S20-622-3222 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							-						
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Images before Summary and units and units of the requested analyses, even if HT is expired, and data will be qualified. tre samples for CO DW Compliance Monitoring? YE yes, please include state forms. Results will be reported to POL. NO NOCET INFORMATION ANIX VERS HIGHTSTRUCTOR Ducta #: getter Project/PO #: ZS00000129 getter Rear any samples NRC Dicensable material? Yes No getter Sampler's Name: getter Are any samples NRC Dicensable material? Yes No getter SAMPLE IDENT-ICATION DATE HAIP Metrix SV (Surface Water) - GW (Ground Water) - WW (Waate Water) - DW (Drinking Water) - SL (Sludge) - SD (Scil) - OL (Oil) - Other (Specily) REMARKS Please refer to ACZ's terms & conditions located on the reverse side of this COC. REMARKS DATE HAIP RI CLIVED BY DATE HAIP						ete							
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June 06, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L94787

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 25, 2012. This project has been assigned to ACZ's project number, L94787. 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 L94787. 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 July 06, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-23

ACZ Sample ID: L94787-01 Date Sampled: 05/22/12 10:23 Date Received: 05/25/12 Sample Matrix: Ground Water

Metals Analysis									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	05/31/12 23:47	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	В	*	mg/L	0.001	0.004	05/31/12 23:47	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:47	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:47	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:37	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:37	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:37	jjc
Lead, dissolved	M200.8 ICP-MS	0.0007	В		mg/L	0.0002	0.001	05/31/12 23:47	msh
Magnesium, dissolved	M200.7 ICP	108			mg/L	0.4	2	05/30/12 20:37	jjc
Molybdenum, dissolved	1 M200.7 ICP	0.07	В		mg/L	0.02	0.1	05/30/12 20:37	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	В		mg/L	0.001	0.006	05/31/12 23:47	msh
Selenium, dissolved	M200.8 ICP-MS	0.0014			mg/L	0.0002	0.0005	05/31/12 23:47	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:47	msh
Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В	*	mg/L	0.1	0.5	05/31/12 13:27	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.76			mg/L	0.02	0.1	06/02/12 15:10	pjb
Residue, Filterable (TDS) @180C	SM2540C	3040			mg/L	10	20	05/25/12 15:01	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:30	tcd



334-5493

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-10

Inorganic Analytical Results

ACZ Sample ID:	L94787-02
Date Sampled:	05/22/12 10:33
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	05/31/12 23:50	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	В *	mg/L	0.001	0.004	05/31/12 23:50	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:50	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:50	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:47	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:47	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:47	jjc
Lead, dissolved	M200.8 ICP-MS	0.0009	В	mg/L	0.0002	0.001	05/31/12 23:50	msh
Magnesium, dissolved	M200.7 ICP	106		mg/L	0.4	2	05/30/12 20:47	jjc
Molybdenum, dissolve	d M200.7 ICP	0.10		mg/L	0.02	0.1	05/30/12 20:47	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	05/31/12 23:50	msh
Selenium, dissolved	M200.8 ICP-MS	0.0011		mg/L	0.0002	0.0005	05/31/12 23:50	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:50	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В *	mg/L	0.1	0.5	05/31/12 13:48	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.70		mg/L	0.02	0.1	06/02/12 15:12	pjb
Residue, Filterable (TDS) @180C	SM2540C	3100		mg/L	10	20	05/25/12 15:01	abm
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	500	06/05/12 15:31	tcd



Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-22

ACZ Sample ID: L94787-03 Date Sampled: 05/22/12 10:46 Date Received: 05/25/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XC	Q Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	05/31/12 23:53	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	В *	mg/L	0.001	0.004	05/31/12 23:53	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:53	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:53	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:50	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:50	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:50	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	В	mg/L	0.0002	0.001	05/31/12 23:53	msh
Magnesium, dissolved	M200.7 ICP	97.6		mg/L	0.4	2	05/30/12 20:50	jjc
Molybdenum, dissolve	d M200.7 ICP	0.15		mg/L	0.02	0.1	05/30/12 20:50	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.006	05/31/12 23:53	msh
Selenium, dissolved	M200.8 ICP-MS	0.0016		mg/L	0.0002	0.0005	05/31/12 23:53	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:53	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XC	Q Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В *	mg/L	0.1	0.5	05/31/12 13:52	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.68		mg/L	0.02	0.1	06/02/12 15:15	pjb
Residue, Filterable (TDS) @180C	SM2540C	3110		mg/L	10	20	05/25/12 15:02	abm
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/05/12 15:31	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-11

Inorganic Analytical Results

ACZ Sample ID:	L94787-04
Date Sampled:	05/22/12 10:58
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	05/31/12 23:57	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	В *	mg/L	0.001	0.004	05/31/12 23:57	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:57	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:57	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:53	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:53	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:53	jjc
Lead, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:57	msh
Magnesium, dissolved	M200.7 ICP	104		mg/L	0.4	2	05/30/12 20:53	jjc
Molybdenum, dissolve	d M200.7 ICP	0.19		mg/L	0.02	0.1	05/30/12 20:53	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	05/31/12 23:57	msh
Selenium, dissolved	M200.8 ICP-MS	0.0015		mg/L	0.0002	0.0005	05/31/12 23:57	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	05/31/12 23:57	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В *	mg/L	0.1	0.5	05/31/12 13:55	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.69		mg/L	0.02	0.1	06/02/12 15:16	pjb
Residue, Filterable (TDS) @180C	SM2540C	3010		mg/L	10	20	05/25/12 15:03	abm
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/05/12 15:32	tcd



Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-28

ACZ Sample ID: L94787-05 Date Sampled: 05/22/12 11:15 Date Received: 05/25/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:06	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В *	mg/L	0.001	0.004	06/01/12 0:06	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:06	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:06	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:56	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:56	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:56	jjc
Lead, dissolved	M200.8 ICP-MS	0.0003	В	mg/L	0.0002	0.001	06/01/12 0:06	msh
Magnesium, dissolved	M200.7 ICP	119		mg/L	0.4	2	05/30/12 20:56	jjc
Molybdenum, dissolve	d M200.7 ICP	0.04	В	mg/L	0.02	0.1	05/30/12 20:56	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 0:06	msh
Selenium, dissolved	M200.8 ICP-MS	0.0018		mg/L	0.0002	0.0005	06/01/12 0:06	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:06	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В *	mg/L	0.1	0.5	05/31/12 13:59	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.00		mg/L	0.02	0.1	06/02/12 15:17	pjb
Residue, Filterable (TDS) @180C	SM2540C	3030		mg/L	10	20	05/25/12 15:03	abm
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/05/12 15:32	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-6A

Inorganic Analytical Results

ACZ Sample ID:	L94787-06
Date Sampled:	05/22/12 11:49
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:10	msh
Arsenic, dissolved	M200.8 ICP-MS		U *	mg/L	0.001	0.004	06/01/12 0:10	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:10	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:10	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:59	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:59	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 20:59	jjc
Lead, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:10	msh
Magnesium, dissolved	M200.7 ICP	103		mg/L	0.4	2	05/30/12 20:59	jjc
Molybdenum, dissolved	d M200.7 ICP	0.50		mg/L	0.02	0.1	05/30/12 20:59	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.006	06/01/12 0:10	msh
Selenium, dissolved	M200.8 ICP-MS	0.0009		mg/L	0.0002	0.0005	06/01/12 0:10	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:10	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	В	mg/L	0.1	0.5	06/01/12 14:05	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.58		mg/L	0.02	0.1	06/02/12 15:18	pjb
Residue, Filterable (TDS) @180C	SM2540C	3170		mg/L	10	20	05/25/12 15:04	abm
Sulfate	D516-02 - Turbidimetric	1800	*	mg/L	100	500	06/05/12 15:32	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-12

Inorganic Analytical Results

ACZ Sample ID:	L94787-07
Date Sampled:	05/22/12 12:00
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:19	msh
Arsenic, dissolved	M200.8 ICP-MS	0.003	В *	mg/L	0.001	0.004	06/01/12 0:19	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:19	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:19	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:02	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:02	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:02	jjc
Lead, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:19	msh
Magnesium, dissolved	M200.7 ICP	107		mg/L	0.4	2	05/30/12 21:02	jjc
Molybdenum, dissolve	d M200.7 ICP	0.19		mg/L	0.02	0.1	05/30/12 21:02	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.006	06/01/12 0:19	msh
Selenium, dissolved	M200.8 ICP-MS	0.0018		mg/L	0.0002	0.0005	06/01/12 0:19	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:19	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	В	mg/L	0.1	0.5	06/01/12 14:09	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.96		mg/L	0.02	0.1	06/02/12 15:19	pjb
Residue, Filterable (TDS) @180C	SM2540C	2830		mg/L	10	20	05/25/12 15:05	abm
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/05/12 15:33	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-14

Inorganic Analytical Results

ACZ Sample ID:	L94787-08
Date Sampled:	05/22/12 12:38
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:23	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В *	mg/L	0.001	0.004	06/01/12 0:23	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:23	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:23	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:12	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:12	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:12	jjc
Lead, dissolved	M200.8 ICP-MS	0.0006	В	mg/L	0.0002	0.001	06/01/12 0:23	msh
Magnesium, dissolved	M200.7 ICP	126		mg/L	0.4	2	05/30/12 21:12	jjc
Molybdenum, dissolve	d M200.7 ICP	0.08	В	mg/L	0.02	0.1	05/30/12 21:12	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 0:23	msh
Selenium, dissolved	M200.8 ICP-MS	0.0008		mg/L	0.0002	0.0005	06/01/12 0:23	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:23	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	В	mg/L	0.1	0.5	06/01/12 14:12	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.07		mg/L	0.02	0.1	06/02/12 15:23	pjb
Residue, Filterable (TDS) @180C	SM2540C	3180		mg/L	10	20	05/25/12 15:05	abm
Sulfate	D516-02 - Turbidimetric	1800	*	mg/L	100	500	06/05/12 15:28	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-15

Inorganic Analytical Results

ACZ Sample ID:	L94787-09
Date Sampled:	05/22/12 12:51
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:26	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В *	mg/L	0.001	0.004	06/01/12 0:26	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:26	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:26	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:15	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:15	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:15	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	В	mg/L	0.0002	0.001	06/01/12 0:26	msh
Magnesium, dissolved	M200.7 ICP	119		mg/L	0.4	2	05/30/12 21:15	jjc
Molybdenum, dissolve	d M200.7 ICP	0.05	В	mg/L	0.02	0.1	05/30/12 21:15	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 0:26	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0002	0.0005	06/01/12 0:26	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:26	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В	mg/L	0.1	0.5	06/01/12 14:16	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.32		mg/L	0.02	0.1	06/02/12 15:24	pjb
Residue, Filterable (TDS) @180C	SM2540C	3150		mg/L	10	20	05/25/12 15:06	abm
Sulfate	D516-02 - Turbidimetric	1800	*	mg/L	100	500	06/05/12 15:28	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-19

Inorganic Analytical Results

ACZ Sample ID:	L94787-10
Date Sampled:	05/22/12 13:07
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:29	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В *	mg/L	0.001	0.004	06/01/12 0:29	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:29	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:29	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:18	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:18	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:18	jjc
Lead, dissolved	M200.8 ICP-MS	0.0013		mg/L	0.0002	0.001	06/01/12 0:29	msh
Magnesium, dissolved	M200.7 ICP	144		mg/L	0.4	2	05/30/12 21:18	jjc
Molybdenum, dissolve	d M200.7 ICP	0.02	В	mg/L	0.02	0.1	05/30/12 21:18	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 0:29	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0002	0.0005	06/01/12 0:29	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:29	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	В	mg/L	0.1	0.5	06/01/12 14:20	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.38		mg/L	0.02	0.1	06/02/12 15:25	pjb
Residue, Filterable (TDS) @180C	SM2540C	3050		mg/L	10	20	05/25/12 15:07	abm
Sulfate	D516-02 - Turbidimetric	1300	*	mg/L	100	500	06/05/12 15:28	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-1

Inorganic Analytical Results

ACZ Sample ID:	L94787-11
Date Sampled:	05/21/12 11:08
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	06/01/12 0:33	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0032		mg/L	0.0005	0.002	06/01/12 0:33	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:33	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:33	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:21	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:21	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:21	jjc
Lead, dissolved	M200.8 ICP-MS	0.0016		mg/L	0.0001	0.0005	06/01/12 0:33	msh
Magnesium, dissolved	M200.7 ICP	82.0		mg/L	0.2	1	05/30/12 21:21	jjc
Molybdenum, dissolve	d M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:21	jjc
Nickel, dissolved	M200.8 ICP-MS	0.0009	В	mg/L	0.0006	0.003	06/01/12 0:33	msh
Selenium, dissolved	M200.8 ICP-MS	0.0008		mg/L	0.0001	0.0003	06/01/12 0:33	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:33	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	В	mg/L	0.1	0.5	06/01/12 14:33	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.36		mg/L	0.02	0.1	06/02/12 15:26	pjb
Residue, Filterable (TDS) @180C	SM2540C	1850		mg/L	10	20	05/25/12 15:16	abm
Sulfate	D516-02 - Turbidimetric	900	*	mg/L	100	500	06/05/12 15:30	tcd



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Inorganic Analytical Results

FMI Gold & Copp	per - Sierrita	ACZ Sample ID:	L94787-12
Project ID:	ZS000001Z9	Date Sampled:	05/21/12 11:30
Sample ID:	IW-2A	Date Received:	05/25/12
		Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	06/01/12 0:36	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0058		mg/L	0.0005	0.002	06/01/12 0:36	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:36	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:36	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:30	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:30	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:30	jjc
Lead, dissolved	M200.8 ICP-MS	0.0008		mg/L	0.0001	0.0005	06/01/12 0:36	msh
Magnesium, dissolved	M200.7 ICP	13.1		mg/L	0.2	1	05/30/12 21:30	jjc
Molybdenum, dissolve	d M200.7 ICP	0.01	В	mg/L	0.01	0.05	05/30/12 21:30	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	06/01/12 0:36	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0001	0.0003	06/01/12 0:36	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:36	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5	В	mg/L	0.1	0.5	06/01/12 14:37	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.37		mg/L	0.02	0.1	06/02/12 15:29	pjb
Residue, Filterable (TDS) @180C	SM2540C	400		mg/L	10	20	05/25/12 15:16	abm
Sulfate	D516-02 - Turbidimetric	121	*	mg/L	5	30	06/05/12 15:22	tcd



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Project ID:	ZS000001Z9
Sample ID:	IW-25

Inorganic Analytical Results

ACZ Sample ID:	L94787-13
Date Sampled:	05/21/12 11:55
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	06/01/12 0:39	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0052		mg/L	0.0005	0.002	06/01/12 0:39	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:39	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:39	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:33	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:33	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	05/30/12 21:33	jjc
Lead, dissolved	M200.8 ICP-MS	0.0003	В	mg/L	0.0001	0.0005	06/01/12 0:39	msh
Magnesium, dissolved	M200.7 ICP	14.0		mg/L	0.2	1	05/30/12 21:33	jjc
Molybdenum, dissolved	d M200.7 ICP	0.01	В	mg/L	0.01	0.05	05/30/12 21:33	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	06/01/12 0:39	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0001	0.0003	06/01/12 0:39	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/01/12 0:39	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5		mg/L	0.1	0.5	06/01/12 14:40	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.27		mg/L	0.02	0.1	06/02/12 15:31	pjb
Residue, Filterable (TDS) @180C	SM2540C	390		mg/L	10	20	05/25/12 15:17	abm
Sulfate	D516-02 - Turbidimetric	109	*	mg/L	5	30	06/05/12 15:24	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-8

Inorganic Analytical Results

ACZ Sample ID:	L94787-14
Date Sampled:	05/21/12 12:15
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:43	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.004	06/01/12 0:43	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:43	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:43	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:36	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:36	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:36	jjc
Lead, dissolved	M200.8 ICP-MS	0.0013		mg/L	0.0002	0.001	06/01/12 0:43	msh
Magnesium, dissolved	M200.7 ICP	123		mg/L	0.4	2	05/30/12 21:36	jjc
Molybdenum, dissolve	d M200.7 ICP	0.10	В	mg/L	0.02	0.1	05/30/12 21:36	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.006	06/01/12 0:43	msh
Selenium, dissolved	M200.8 ICP-MS	0.0003	В	mg/L	0.0002	0.0005	06/01/12 0:43	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:43	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В *	mg/L	0.1	0.5	06/01/12 14:43	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.41		mg/L	0.02	0.1	06/02/12 15:32	pjb
Residue, Filterable (TDS) @180C	SM2540C	3120		mg/L	10	20	05/25/12 15:18	abm
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	500	06/05/12 15:34	tcd



Project ID:	ZS000001Z9
Sample ID:	IW-9

Inorganic Analytical Results

ACZ Sample ID:	L94787-15
Date Sampled:	05/21/12 12:25
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 0:59	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.004	06/01/12 0:59	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:59	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:59	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:39	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:39	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:39	jjc
Lead, dissolved	M200.8 ICP-MS	0.0012		mg/L	0.0002	0.001	06/01/12 0:59	msh
Magnesium, dissolved	M200.7 ICP	102		mg/L	0.4	2	05/30/12 21:39	jjc
Molybdenum, dissolve	d M200.7 ICP	0.06	В	mg/L	0.02	0.1	05/30/12 21:39	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 0:59	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0002	0.0005	06/01/12 0:59	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 0:59	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5	В *	mg/L	0.1	0.5	06/01/12 14:57	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.63		mg/L	0.02	0.1	06/02/12 15:34	pjb
Residue, Filterable (TDS) @180C	SM2540C	2990		mg/L	10	20	05/25/12 15:18	abm
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	500	06/05/12 15:34	tcd



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-4

Inorganic Analytical Results

ACZ Sample ID:	L94787-16
Date Sampled:	05/21/12 12:43
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 1:02	msh
Arsenic, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.004	06/01/12 1:02	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:02	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:02	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:49	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:49	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:49	jjc
Lead, dissolved	M200.8 ICP-MS	0.0002	В	mg/L	0.0002	0.001	06/01/12 1:02	msh
Magnesium, dissolved	M200.7 ICP	93.9		mg/L	0.4	2	05/30/12 21:49	jjc
Molybdenum, dissolve	d M200.7 ICP	0.04	В	mg/L	0.02	0.1	05/30/12 21:49	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 1:02	msh
Selenium, dissolved	M200.8 ICP-MS	0.0006		mg/L	0.0002	0.0005	06/01/12 1:02	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:02	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B *	mg/L	0.1	0.5	06/01/12 15:00	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.45		mg/L	0.02	0.1	06/02/12 15:37	pjb
Residue, Filterable (TDS) @180C	SM2540C	2850		mg/L	10	20	05/25/12 15:19	abm
Sulfate	D516-02 - Turbidimetric	1500	*	mg/L	100	500	06/05/12 15:37	tcd



Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-26

ACZ Sample ID: L94787-17 Date Sampled: 05/21/12 12:44 Date Received: 05/25/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 1:05	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.004	06/01/12 1:05	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:05	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:05	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:52	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:52	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:52	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	В	mg/L	0.0002	0.001	06/01/12 1:05	msh
Magnesium, dissolved	M200.7 ICP	97.4		mg/L	0.4	2	05/30/12 21:52	jjc
Molybdenum, dissolved	d M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:52	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 1:05	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0002	0.0005	06/01/12 1:05	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:05	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6	*	mg/L	0.1	0.5	06/01/12 15:03	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.56		mg/L	0.02	0.1	06/02/12 15:38	pjb
Residue, Filterable (TDS) @180C	SM2540C	2740		mg/L	10	20	05/25/12 15:20	abm
Sulfate	D516-02 - Turbidimetric	1500	*	mg/L	100	500	06/05/12 15:37	tcd



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-24

Inorganic Analytical Results

ACZ Sample ID:	L94787-18
Date Sampled:	05/22/12 09:37
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 1:09	msh
Arsenic, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.004	06/01/12 1:09	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:09	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:09	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:55	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:55	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:55	jjc
Lead, dissolved	M200.8 ICP-MS	0.0003	В	mg/L	0.0002	0.001	06/01/12 1:09	msh
Magnesium, dissolved	M200.7 ICP	94.2		mg/L	0.4	2	05/30/12 21:55	jjc
Molybdenum, dissolved	d M200.7 ICP	0.06	В	mg/L	0.02	0.1	05/30/12 21:55	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 1:09	msh
Selenium, dissolved	M200.8 ICP-MS	0.0005	В	mg/L	0.0002	0.0005	06/01/12 1:09	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:09	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B *	mg/L	0.1	0.5	06/01/12 15:06	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.38		mg/L	0.02	0.1	06/02/12 15:39	pjb
Residue, Filterable (TDS) @180C	SM2540C	3000		mg/L	10	20	05/25/12 15:20	abm
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	500	06/05/12 15:37	tcd



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-5A

Inorganic Analytical Results

ACZ Sample ID:	L94787-19
Date Sampled:	05/22/12 09:53
Date Received:	05/25/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 1:12	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.004	06/01/12 1:12	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:12	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:12	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:58	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:58	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 21:58	jjc
Lead, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:12	msh
Magnesium, dissolved	M200.7 ICP	104		mg/L	0.4	2	05/30/12 21:58	jjc
Molybdenum, dissolve	d M200.7 ICP	0.07	В	mg/L	0.02	0.1	05/30/12 21:58	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.006	06/01/12 1:12	msh
Selenium, dissolved	M200.8 ICP-MS	0.0008		mg/L	0.0002	0.0005	06/01/12 1:12	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:12	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В *	mg/L	0.1	0.5	06/01/12 15:20	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.50		mg/L	0.02	0.1	06/02/12 15:41	pjb
Residue, Filterable (TDS) @180C	SM2540C	3050		mg/L	10	20	05/25/12 15:21	abm
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/05/12 15:37	tcd



Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-27

ACZ Sample ID: L94787-20 Date Sampled: 05/22/12 10:06 Date Received: 05/25/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/01/12 1:15	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.004	06/01/12 1:15	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:15	msh
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:15	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 22:01	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 22:01	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	05/30/12 22:01	jjc
Lead, dissolved	M200.8 ICP-MS	0.0006	В	mg/L	0.0002	0.001	06/01/12 1:15	msh
Magnesium, dissolved	M200.7 ICP	92.7		mg/L	0.4	2	05/30/12 22:01	jjc
Molybdenum, dissolved	d M200.7 ICP	0.04	В	mg/L	0.02	0.1	05/30/12 22:01	jjc
Nickel, dissolved	M200.8 ICP-MS	0.003	В	mg/L	0.001	0.006	06/01/12 1:15	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007		mg/L	0.0002	0.0005	06/01/12 1:15	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/01/12 1:15	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B *	mg/L	0.1	0.5	06/01/12 15:24	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.51		mg/L	0.02	0.1	06/02/12 15:42	pjb
Residue, Filterable (TDS) @180C	SM2540C	2920		mg/L	10	20	05/25/12 15:22	abm
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/05/12 15:37	tcd



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit WG323619 ICV ICV 05/31/12 23:37 MS120416-2 .02 .02037 mg/L 101.9 90 110 .00012 .00013 .00013 .00013 .00013 .00013 .00014 .00013 .00014 .00013 .00013 .00013	Qual
WG323619ICV ICV 05/31/12 23:37 MS120416-2 .02 .02037 mg/L 101.9 90 110 WG323619ICV ICB 05/31/12 23:43 MS120531-3 .01 .00998 mg/L 99.8 85 115 L94787-04AS AS 06/01/12 0:00 MS120531-3 .02 U .02176 mg/L 106.8 70 130 6.84 20 L94787-04AS AS 06/01/12 0:03 MS120531-3 .02 U .02132 mg/L 116.5 70 130 6.84 20 L94787-14AS AS 06/01/12 0:46 MS120531-3 .02 U .02132 mg/L 111.2 70 130 4.22 20 Arsenic, dissolver M200.8 ICP-MS V .02132 mg/L 106.6 70 130 4.22 20 Arsenic, dissolver M200.8 ICP-MS U .02132 mg/L 106.6 90 110 .02132 .02132 .02132 .02132 <t< th=""><th></th></t<>	
WG323619ICB ICB 05/31/12 05/31/12 000000000000000000000000000000000000	
WG323619LFB LFB 05/31/12 23:43 MS120531-3 .01 .00998 mg/L 99.8 85 115 L94787-04AS AS 06/01/12 0:00 MS120531-3 .02 U .02176 mg/L 108.8 70 130 L94787-04ASD ASD 06/01/12 0:03 MS120531-3 .02 U .0233 mg/L 116.5 70 130 6.84 20 L94787-04ASD ASD 06/01/12 0:46 MS120531-3 .02 U .02224 mg/L 111.2 70 130 4.22 20 J94787-14ASD ASD 06/01/12 0:49 MS120531-3 .02 U .02126 mg/L 106.6 70 130 4.22 20 Arsenic, dissolvert M200.8 ICP-MS M200.8 ICP-MS mg/L ng/L 106.6 70 130 6.84 20 WG323619ICV ICV 05/31/12 23:47 MS120416-2 .05 .05431 mg/L 108.6 90 110	
L94787-04AS AS 06/01/12 0:00 MS120531-3 .02 U .02176 mg/L 108.8 70 130 L94787-04ASD ASD 06/01/12 0:03 MS120531-3 .02 U .0233 mg/L 116.5 70 130 6.84 20 L94787-14AS AS 06/01/12 0:49 MS120531-3 .02 U .02224 mg/L 111.2 70 130 6.84 20 L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .02 U .02132 mg/L 106.6 70 130 4.22 20 Arsenic, dissolvet M200.8 ICP-MS M200.8 ICP-MS Rec Lower Upper RPD Limit WG323619ICV ICV 05/31/12 23:37 MS120416-2 .05 .05431 mg/L 108.6 90 110 . . . WG323619ICV ICV 05/31/12 23:40 MS120531-3 .05005 .05431 mg/L 108.8 85 115 . . U9323619ICV ICV 05/31/12 23:43 MS120531-3	
L94787-04ASD L94787-14AS ASD 06/01/12 0:03 06/01/12 0:46 MS120531-3 MS120531-3 .02 U .0233 .02 mg/L mg/L 116.5 70 130 6.84 20 L94787-14ASD ASD 06/01/12 0:46 MS120531-3 .02 U .02234 mg/L 111.2 70 130 4.22 20 Arsenic, dissolved M200.8 ICP-MS M200.8 ICP-MS MS120531-3 .02 U .02132 mg/L 106.6 70 110 4.22 20 Arsenic, dissolved M200.8 ICP-MS M200.8 ICP-MS Rec Lower Upper RPD Limit WG323619 ICV 05/31/12 23:37 MS120416-2 .05 .05431 mg/L 108.6 90 110 . . . WG323619ICV ICV 05/31/12 23:43 MS120531-3 .05005 .05431 mg/L 108.6 90 110 . . . WG323619ICB ICB 05/31/12 23:43 MS120531-3 .05005 .05446 mg/L 108.8 85 115 .	
L94787-14AS L94787-14ASD AS ASD 06/01/12 0:49 MS120531-3 MS120531-3 .02 .02 U .02224 .02132 mg/L mg/L 111.2 106.6 70 130 4.22 20 Arsenic, dissolved M200.8 ICP-MS M200.8 ICP-MS V Sample Found Units Rec Lower Upper RPD Limit WG323619 ICV 05/31/12 23:37 MS120531-3 .0505 .05431 mg/L 108.6 90 110 . Ker Lower Upper RPD Limit WG323619 ICV 05/31/12 23:37 MS120416-2 .05 .05431 mg/L 108.6 90 110 . Ker Lower Upper RPD Limit WG323619ICV ICV 05/31/12 23:43 MS120531-3 .05005 .05431 mg/L 108.6 90 110 . Ker Lower Upper RPD Limit WG323619ICF ICB 05/31/12 23:43 MS120531-3 .05005 .05446 mg/L 108.8 85 115 L L94787-04AS AS	
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Arsenic, dissolved M200.8 ICP-MS Acz ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit WG323619I U ICV 05/31/12 23:37 MS120416-2 .05 .05431 mg/L 108.6 90 110 U mg/L -0.0015 0.0015 U MG323619ICV ICV 05/31/12 23:40 U mg/L -0.0015 0.0015 U MS120531-3 .05005 .05446 mg/L 108.8 85 115 U U mg/L 102.6 70 130 7.08 20 L94787-04AS AS 06/01/12 0:00 MS120531-3 .1001 .001 .1127 mg/L 130.6 70 130 7.08 20 L94787-04ASD AS 06/01/12 0:03 MS120531-3 .1001 .001 .11317 mg/L 130.6 70 130 7.08 20 L94787-14AS AS 06/01/12 0:46 MS120531-3 .1001 .002 .1174 mg/L 115.3	
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit WG323619 WG323619ICV ICV 05/31/12 23:37 MS120416-2 .05 .05431 mg/L 108.6 90 110 - - WG323619ICB ICB 05/31/12 23:40 U mg/L -0.0015 0.0015 - - - 0.0015 0.0015 - - - - - - - - - - - - - - - 0.0015 0.0015 - - - - - - - 0.0015 0.0015 - - - - - 0.0015 0.0015 - - - 0.0015 0.0015 - - - - - 110.8 85 115 - - - - 130 - - - 124787-04ASD ASD <t< td=""><td></td></t<>	
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WG323619ICV ICV 05/31/12 23:37 MS120416-2 .05 .05431 mg/L 108.6 90 110 WG323619ICB ICB 05/31/12 23:40 U mg/L 108.6 90 110 -0.0015 0.0015 WG323619ICB ICB 05/31/12 23:43 MS120531-3 .05005 .05446 mg/L 108.8 85 115 L94787-04AS AS 06/01/12 0:00 MS120531-3 .1001 .001 .1227 mg/L 121.6 70 130 L94787-04ASD ASD 06/01/12 0:03 MS120531-3 .1001 .001 .1317 mg/L 130.6 70 130 7.08 20 L94787-14AS AS 06/01/12 0:46 MS120531-3 .1001 .002 .1283 mg/L 126.2 70 130 20 L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .1001 .002 .1174 mg/L 115.3 70 130 8.87 20 L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .1001 .002 .1174 <td< th=""><th>MA</th></td<>	MA
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L94787-14AS AS 06/01/12 0:46 MS120531-3 .1001 .002 .1283 mg/L 126.2 70 130 L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .1001 .002 .1174 mg/L 115.3 70 130 8.87 20 Beryllium, dissolved M200.8 ICP-MS M200.8 ICP-MS M200.8 ICP-MS M200.8 ICP-MS M200.8 ICP-MS	MA
L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .1001 .002 .1174 mg/L 115.3 70 130 8.87 20 Beryllium, dissolved M200.8 ICP-MS CP-MS Control of the second se	
Beryllium, dissolved M200.8 ICP-MS	
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit	
	Qual
WG323619	
WG323619ICV ICV 05/31/12 23:37 MS120416-2 .05 .04759 mg/L 95.2 90 110	
WG323619ICB ICB 05/31/12 23:40 U mg/L -0.0003 0.0003	
WG323619LFB LFB 05/31/12 23:43 MS120531-3 .0501 .04981 mg/L 99.4 85 115	
L94787-04AS AS 06/01/12 0:00 MS120531-3 .1002 U .11038 mg/L 110.2 70 130	
L94787-04ASD ASD 06/01/12 0:03 MS120531-3 .1002 U .11648 mg/L 116.2 70 130 5.38 20	
L94787-14AS AS 06/01/12 0:46 MS120531-3 .1002 U .11026 mg/L 110 70 130	
L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .1002 U .09964 mg/L 99.4 70 130 10.12 20	
Cadmium, dissolved M200.8 ICP-MS	
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit	Qual
WG323619	
WG323619ICV ICV 05/31/12 23:37 MS120416-2 .05 .0508 mg/L 101.6 90 110	
WG323619ICB ICB 05/31/12 23:40 U mg/L -0.0003 0.0003	
WG323619LFB LFB 05/31/12 23:43 MS120531-3 .0501 .05202 mg/L 103.8 85 115	
L94787-04AS AS 06/01/12 0:00 MS120531-3 .1002 U .10588 mg/L 105.7 70 130	
L94787-04ASD ASD 06/01/12 0:03 MS120531-3 .1002 U .1127 mg/L 112.5 70 130 6.24 20	
L94787-14AS AS 06/01/12 0:46 MS120531-3 .1002 U .10746 mg/L 107.2 70 130	
L94787-14ASD ASD 06/01/12 0:49 MS120531-3 .1002 U .0967 mg/L 96.5 70 130 10.54 20	

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Chromium, diss	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		1.985	mg/L	99.3	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.504	mg/L	100.8	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	U	1.035	mg/L	103.5	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	U	1.061	mg/L	106.1	85	115	2.48	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.525	mg/L	105	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.524	mg/L	104.8	85	115	0.19	20	
Cobalt, dissolve	ed		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		2.023	mg/L	101.2	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.495	mg/L	99	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	U	1.029	mg/L	102.9	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	U	1.048	mg/L	104.8	85	115	1.83	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.52	mg/L	104	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.512	mg/L	102.4	85	115	1.55	20	
Copper, dissolv	/ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		2.01	mg/L	100.5	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.502	mg/L	100.4	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	U	1.071	mg/L	107.1	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	U	1.096	mg/L	109.6	85	115	2.31	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.538	mg/L	107.6	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.534	mg/L	106.8	85	115	0.75	20	

(800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323599													
WG323599ICV	ICV	05/31/12 10:10	WC120522-	2.002		1.9	mg/L	94.9	95	105			
WG323599ICB	ICB	05/31/12 10:15				U	mg/L		-0.3	0.3			
WG323599LFB1	LFB	05/31/12 10:22	WC120124-	5		4.86	mg/L	97.2	90	110			
WG323599LFB2	LFB	05/31/12 13:24	WC120124-	5		4.75	mg/L	95	90	110			
L94787-01AS	AS	05/31/12 13:30	WC120124-	5	.2	4.84	mg/L	92.8	90	110			
L94787-01DUP	DUP	05/31/12 13:34			.2	.21	mg/L				4.9	20	RA
WG323683													
WG323683ICV	ICV	06/01/12 11:42	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323683ICB	ICB	06/01/12 11:45				U	mg/L		-0.3	0.3			
WG323685													
WG323685ICV	ICV	06/01/12 13:38	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323685ICB	ICB	06/01/12 13:42				U	mg/L		-0.3	0.3			
WG323685LFB1	LFB	06/01/12 13:49	WC120124-	5		5.1	mg/L	102	90	110			
L94750-01AS	AS	06/01/12 13:59	WC120124-	5	1.3	6.54	mg/L	104.8	90	110			
L94750-01DUP	DUP	06/01/12 14:02			1.3	1.33	mg/L				2.3	20	
L94787-14AS	AS	06/01/12 14:51	WC120124-	5	.3	5.12	mg/L	96.4	90	110			
L94787-14DUP	DUP	06/01/12 14:54			.3	.34	mg/L				12.5	20	RA
WG323685LFB2	LFB	06/01/12 15:37	WC120124-	5		5.05	mg/L	101	90	110			
Lead, dissolved			M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05329	mg/L	106.6	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05407	mg/L	108	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	U	.11846	mg/L	118.3	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	U	.12546	mg/L	125.3	70	130	5.74	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.0013	.12266	mg/L	121.2	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.0013	.11256	mg/L	111.1	70	130	8.59	20	
Magnesium, dise	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	100		101.6	mg/L	101.6	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.6	0.6			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	50.007		51.57	mg/L	103.1	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	100.014	108	213.2	mg/L	105.2	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	100.014	108	212.8	mg/L	104.8	85	115	0.19	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	50.007	82	135.7	mg/L	107.4	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	50.007	82	135.3	mg/L	106.6	85	115	0.3	20	

Inorganic QC Summary

ACZ Project ID: L94787

Project ID:

ZS000001Z9

FMI Gold & Copper - Sierrita

Molybdenum,	dissolved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		2.03	mg/L	101.5	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.523	mg/L	104.6	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	.07	1.128	mg/L	105.8	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	.07	1.124	mg/L	105.4	85	115	0.36	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.554	mg/L	110.8	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.538	mg/L	107.6	85	115	2.93	20	
Nickel, dissolved M200.8 ICP-MS													
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05141	mg/L	102.8	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0018	0.0018			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05233	mg/L	104.6	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	U	.1027	mg/L	102.6	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	U	.1104	mg/L	110.3	70	130	7.23	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.001	.1056	mg/L	104.5	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.001	.0958	mg/L	94.7	70	130	9.73	20	
Nitrate/Nitrite	as N		M353.2 - H	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ACZ ID WG323745	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
	Type	Analyzed 06/02/12 14:29	PCN/SCN WI120405-3	QC 2.416	Sample	Found 2.402	Units mg/L	Rec 99.4	Lower 90	Upper 110	RPD	Limit	Qual
WG323745					Sample						RPD	Limit	Qual
WG323745 WG323745ICV	ICV	06/02/12 14:29			Sample	2.402	mg/L		90	110	RPD	Limit	Qual
WG323745 WG323745ICV WG323745ICB	ICV	06/02/12 14:29			Sample	2.402	mg/L		90	110	RPD	Limit	Qual
WG323745 WG323745ICV WG323745ICB WG323746	ICV ICB	06/02/12 14:29 06/02/12 14:30	WI120405-3	2.416	Sample	2.402 U	mg/L mg/L	99.4	90 -0.06	110 0.06	RPD	Limit	Qual
WG323745 WG323745ICV WG323745ICB WG323746 WG323746LFB	ICV ICB LFB	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09	WI120405-3 WI120211-3	2.416		2.402 U 1.965	mg/L mg/L mg/L	99.4 98.3	90 -0.06 90	110 0.06 110	RPD	Limit 20	Qual
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS	ICV ICB LFB AS	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11	WI120405-3 WI120211-3	2.416	.76	2.402 U 1.965 2.717	mg/L mg/L mg/L mg/L	99.4 98.3	90 -0.06 90	110 0.06 110			Qual
WG323745 WG323745ICV WG323745ICB WG323746IFB L94787-01AS L94787-02DUP	ICV ICB LFB AS DUP	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13	WI120405-3 WI120211-3 WI120211-3	2.416 2 2	.76 .7	2.402 U 1.965 2.717 .704	mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9	90 -0.06 90 90	110 0.06 110 110			Qual
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS	ICV ICB LFB AS DUP AS DUP	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30	WI120405-3 WI120211-3 WI120211-3	2.416 2 2	.76 .7 1.36	2.402 U 1.965 2.717 .704 3.344	mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9	90 -0.06 90 90	110 0.06 110 110	0.6	20	Qual
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP	ICV ICB LFB AS DUP AS DUP	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30	WI120405-3 WI120211-3 WI120211-3 WI120211-3	2.416 2 2	.76 .7 1.36	2.402 U 1.965 2.717 .704 3.344	mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9	90 -0.06 90 90	110 0.06 110 110	0.6	20	Qual
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter	ICV ICB LFB AS DUP AS DUP	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 06/02/12 15:30	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C	2.416 2 2 2	.76 .7 1.36 1.37	2.402 U 1.965 2.717 .704 3.344 1.37	mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9 99.2	90 -0.06 90 90 90	110 0.06 110 110 110	0.6 0	20 20	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter ACZ ID	ICV ICB LFB AS DUP AS DUP	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 06/02/12 15:30	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C	2.416 2 2 2	.76 .7 1.36 1.37	2.402 U 1.965 2.717 .704 3.344 1.37	mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9 99.2	90 -0.06 90 90 90	110 0.06 110 110 110	0.6 0	20 20	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter ACZ ID WG323389	ICV ICB LFB AS DUP AS DUP rable (TDS Type	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 06/02/12 15:30 @180C Analyzed	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C	2.416 2 2 2	.76 .7 1.36 1.37	2.402 U 1.965 2.717 .704 3.344 1.37	mg/L mg/L mg/L mg/L mg/L mg/L Units	99.4 98.3 97.9 99.2	90 -0.06 90 90 90	110 0.06 110 110 110 Upper	0.6 0	20 20	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter ACZ ID WG323389 WG323389PBW	ICV ICB LFB AS DUP AS DUP rable (TDS Type	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 © @180C Analyzed	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C PCN/SCN	2.416 2 2 2 QC	.76 .7 1.36 1.37	2.402 U 1.965 2.717 .704 3.344 1.37 Found U	mg/L mg/L mg/L mg/L mg/L Units	99.4 98.3 97.9 99.2 Rec	90 -0.06 90 90 90 Lower	110 0.06 110 110 110 110 Upper 20	0.6 0	20 20	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter ACZ ID WG323389 WG323389PBW WG323389LCSW	ICV ICB LFB AS DUP AS DUP rable (TDS Type PBW C LCSW	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 c) @180C Analyzed	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C PCN/SCN	2.416 2 2 2 QC	.76 .7 1.36 1.37 Sample	2.402 U 1.965 2.717 .704 3.344 1.37 Found U 240	mg/L mg/L mg/L mg/L mg/L Units mg/L mg/L	99.4 98.3 97.9 99.2 Rec	90 -0.06 90 90 90 Lower	110 0.06 110 110 110 110 Upper 20	0.6 0 RPD	20 20 Limit	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter ACZ ID WG323389 WG323389 WG323389PBW WG323389LCSW L94787-10DUP	ICV ICB LFB AS DUP AS DUP rable (TDS Type PBW C LCSW	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 c) @180C Analyzed	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C PCN/SCN	2.416 2 2 2 QC	.76 .7 1.36 1.37 Sample	2.402 U 1.965 2.717 .704 3.344 1.37 Found U 240	mg/L mg/L mg/L mg/L mg/L Units mg/L mg/L	99.4 98.3 97.9 99.2 Rec	90 -0.06 90 90 90 Lower	110 0.06 110 110 110 110 Upper 20	0.6 0 RPD	20 20 Limit	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-11AS L94787-12DUP Residue, Filter ACZ ID WG323389 WG323389PBW WG323389PBW WG323389CSW L94787-10DUP	ICV ICB LFB AS DUP AS DUP rable (TDS Type rable (CSW DUP PBW PBW	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:13 06/02/12 15:28 06/02/12 15:20 06/02/12 15:00 05/25/12 15:00 05/25/12 15:07	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C PCN/SCN	2.416 2 2 2 QC	.76 .7 1.36 1.37 Sample	2.402 U 1.965 2.717 .704 3.344 1.37 Found U 240 3028	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9 99.2 Rec	90 -0.06 90 90 90 Lower -20 80	110 0.06 110 110 110 110 Upper 20 120	0.6 0 RPD	20 20 Limit	
WG323745 WG323745ICV WG323745ICB WG323746LFB L94787-01AS L94787-02DUP L94787-12DUP L94787-12DUP Residue, Filter ACZ ID WG323389 WG323389PBW WG323389PBW WG323389CSW L94787-10DUP WG323390 WG323390BW	ICV ICB LFB AS DUP AS DUP rable (TDS Type rable (CSW DUP PBW PBW	06/02/12 14:29 06/02/12 14:30 06/02/12 15:09 06/02/12 15:11 06/02/12 15:13 06/02/12 15:13 06/02/12 15:28 06/02/12 15:30 06/02/12 15:00 05/25/12 15:00 05/25/12 15:07 05/25/12 15:15	WI120405-3 WI120211-3 WI120211-3 WI120211-3 SM2540C PCN/SCN PCN39024	2.416 2 2 2 QC 260	.76 .7 1.36 1.37 Sample	2.402 U 1.965 2.717 .704 3.344 1.37 Found U 240 3028 U	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	99.4 98.3 97.9 99.2 Rec 92.3	90 -0.06 90 90 90 <u>90</u> <u>Lower</u> -20 80	110 0.06 110 110 110 110 Upper 20 120 20	0.6 0 RPD	20 20 Limit	

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Selenium, disse	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05415	mg/L	108.3	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05211	mg/L	104.1	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	.0015	.11988	mg/L	118.3	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	.0015	.12448	mg/L	122.9	70	130	3.76	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.0003	.12208	mg/L	121.7	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.0003	.11148	mg/L	111.1	70	130	9.08	20	
Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323851													
WG323851ICB	ICB	06/05/12 14:45				U	mg/L		-3	3			
WG323851ICV	ICV	06/05/12 14:45	WI120523-4	20		19.2	mg/L	96	90	110			
WG323851LFB	LFB	06/05/12 15:20	WI120508-1	10		10.7	mg/L	107	90	110			
L94787-12AS	AS	06/05/12 15:24	SO4TURB5	10	121	122.7	mg/L	17	90	110			M3
L94787-01DUP	DUP	06/05/12 15:30			1600	1670	mg/L				4.3	20	
L94787-02AS	AS	06/05/12 15:31	SO4TURB10	10	1700	1700	mg/L	0	90	110			M3
L94787-11DUP	DUP	06/05/12 15:34			900	970	mg/L				7.5	20	RA
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05336	mg/L	106.7	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05426	mg/L	108.4	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	U	.12002	mg/L	119.9	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	U	.1277	mg/L	127.6	70	130	6.2	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	U	.12468	mg/L	124.6	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	U	.11378	mg/L	113.7	70	130	9.14	20	



FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94787-01	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323599	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-02	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323599	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-03	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323599	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-04	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323599	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-05	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323599	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-06	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.



FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94787-07	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-08	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-09	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-10	WG323619	Arsenic, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	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.
L94787-11	WG323851	Sulfate	D516-02 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-12	WG323851	Sulfate	D516-02 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-13	WG323851	Sulfate	D516-02 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-14	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94787-15	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-16	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-17	WG323685		SM4500F-C		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-18	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-19	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94787-20	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323851	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



FMI Gold & Copper - Sierrita

ACZ Project ID: L94787

No certification qualifiers associated with this analysis

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje	ect ID:	L9478	
ZS00001Z9	Date Rec	eived: 0	5/25/201	2 09:11
	Receive	ed By:		ksj
	Date P	rinted:	5/2	25/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
Na15437	2.3	15

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

Notes

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

L94787	ACZ Project ID:
05/25/2012 09:11	Date Received:
ksj	Received By:
5/25/2012	Date Printed:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94787-01	IW-23		Y		Y							
L94787-02	IW-10		Y		Y							
L94787-03	IW-22		Y		Y							
L94787-04	IW-11		Y		Y							
L94787-05	IW-28		Y		Y							
L94787-06	IW-6A		Y		Y							
L94787-07	IW-12		Y		Y							
L94787-08	IW-14		Y		Y							
L94787-09	IW-15		Y		Y							
L94787-10	IW-19		Y		Y							
L94787-11	IW-1		Y		Y							
L94787-12	IW-2A		Y		Y							
L94787-13	IW-25		Y		Y							
L94787-14	IW-8		Y		Y							
L94787-15	IW-9		Y		Y							
L94787-16	IW-4		Y		Y							
L94787-17	IW-26		Y		Y							
L94787-18	IW-24		Y		Y							
L94787-19	IW-5A		Y		Y							
L94787-20	IW-27		Y		Y							
Sample C	container Preservation Legend											

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
В	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
0	Raw/Sulfuric	ORANGE	pH must be < 2
Р	Raw/NaOH	PURPLE	pH must be > 12 *
Т	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

			Addre	ss: 620	0 W. Du	val Min	e Road		
Name: Jon Anderson Company: Freeport-M	CMoRan Sierrita Inc.				en Valle				
E-mail: jonathan_ande		-	Telepi		520-648-				
Copy of Report to:									
Name: Ben Daigneau	<u></u>		E-mai	: bdaig	neau@c	learcree	kassocia	tes.com	
Company: Clear Creel			Telepi	hone:	520-622-	3222			
Involceito.									
Name:			Addre	SS:					
Company:									
E-mail:			Telep	hone:					
	st holding time (HT), or if Insuffic				ete			YES	
	on, shall ACZ proceed with reque intact client for further instruction				O"			NO	
	oceed with the requested analyse					vill be qu	alified.		
Are samples for CO DW	Compliance Monitoring?							YES	
	ate forms. Results will be reporte	d to PQL.				ar enti		NO	×
PROJECT INFORMA	FION			ANA. 1	rsES REC		н (акроа : П	381-28-675	e queer i
Quote #:	······································	_	2						
Project/PO #: ZS0000			# of Containers	Quarterly				1	
Reporting state for cor	npliance testing:		onta	e					
Sampler's Name:		_	U S	a					
Are any samples NRC SAMPLE IDENTIFIC	licensable material? Yes No CATION DATE:TIME	l Matrix		3					
	05/22/12 : 1023	GW	3	×				-	+
IW-23 IW-10	05/22/12:1023	GW	3	×			+		
IW-22	05/22/12 : 1046	GW	3	×					
IW-11	05/22/12 : 1058	GW	3	×					
IW-28	05/22/12 : 1115	GW	3	×					
IW-6A	05/22/12 : 1149	GW	3	×					
IW-12	05/22/12 : 1200	GW	3	×					
IW-14	05/22/12 : 1238	GW	3	×					
	05/22/12 : 1251	GW	3	×					
IW-15	05/22/12:1307	GW	3	×					

FRMAD050.01.15.09

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	Laboratories, Inc	o. <u>L</u> a	11	149	<u>8</u> -	\mathbf{F}	СН	AIN)	f CUSTOD'	
Report for	Steamboat Springs, CO 80487 (800)) 334-5493								
Name: Jon Anderse		<u> </u>				D 1		_		
	t-McMoRan Sierrita Inc.	-	Add		· .	-	Mine Roa	d		
E-mail: jonathan_ar			Tala				<u>AZ 85614</u>		<u></u>	
				phone:	520-0	40-004	4			
Cory of Report for			- <u>-</u>							
Name: Ben Daigne							creekassoc	iates.con	n	
Company: Clear Cr	eek Associates		Tele	phone:	520-6	22-322	2			
Invoice to,										
Name:			Addr	ess:						
Company:										
E-mail:				ohone:						
If sample(s) received analysis before evoir	past holding time (HT), or if insuffi ation, shall ACZ proceed with requ	icient HT rei	mains	to comp	lete		-	YES		
If "NO" then ACZ will	contact client for further instruction	on. If neithe	er "YES	" nor "I	10"			NO		
is indicated, ACZ will	proceed with the requested analys	ses, even if	HT is e	xpired,	and dat	a will b	e qualified.			
	DW Compliance Monitoring?							YES		
PROJECT INFORM	state forms. Results will be report	ted to PQL.		ANAI	YSES R	FOULS	ithD (attacl	NO Fiist on ai	× sequote number)	
Quote #:	······································									
Project/PO #: ZS00	0001Z9		ers					Ĩ		
Reporting state for c	ompliance testing:		tain	L.						1
Sampler's Name:			of Containers	Ť						
Are any samples NR	C licensable material? Yes No		fo f	Quarterly						
SAMPLE IDENTIF	TCATION DATL:TIME	Matrix		Ø	1					
IW-1	05/21/12:1108	GW	3	×]				†— <u>†</u> ———	
IW-2A	05/21/12 : 1130	GW	3	×						
IW-25	05/21/12 : 1155	GW	3	×						
IW-8	05/21/12 : 1215	GW	3	×						
IW-9	05/21/12 : 1225	GW	3	×						
IW-4	05/21/12 : 1243	GW	3	×						
IW-26	05/21/12 : 1244	GW	3	×						
IW-24	05/22/12:0937	GW	3	×						
IW-5A	05/22/12:0953	GW	3	×						
IW-27	05/22/12:1006	GW	3	×						
	Water) · GW (Ground Water) · WW (Wast	te Water) · DW	V (Drinki	ng Water) · SL (SI	udge) · S	O (Soil) · OL (Oil) · Other	(Specify)	
REMARKS										
UPS Tracking # /	28677E4			100			577			
RCLINCH	Please refer to ACZ's terms		ns loca					OC.		
RELINQUI					ECE IV	ED BY			DATE:TIME	
Alexis Alvarez	05/24/12 :	1430	h-	the	Y	5/2	5712		0900	
	`				•••	•				7



Analytical Report

June 07, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L94836

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 30, 2012. This project has been assigned to ACZ's project number, L94836. 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 L94836. 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 July 07, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	HAVENGOLF

ACZ Sample ID: L94836-01 Date Sampled: 05/29/12 09:52 Date Received: 05/30/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	88.05		mg/L	1	5	06/06/12 2:44	сср



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate	Ifate M300.0 - Ion Chromatography												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323820													
WG323820ICV	ICV	06/05/12 11:58	WI120406-1	50.15		51.04	mg/L	101.8	90	110			
WG323820ICB	ICB	06/05/12 12:19				U	mg/L		-1.5	1.5			
WG323824													
WG323824LFB1	LFB	06/05/12 16:53	WI120312-2	30		29.94	mg/L	99.8	90	110			
L94820-04DUP	DUP	06/05/12 22:31			8.61	8.6	mg/L				0.1	20	
L94820-05AS	AS	06/05/12 23:13	WI120312-2	30	24.71	54.27	mg/L	98.5	90	110			
WG323824LFB2	LFB	06/06/12 3:05	WI120312-2	30		29.99	mg/L	100	90	110			



ACZ Project ID: L94836

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



FMI Gold & Copper - Sierrita

ACZ Project ID: L94836

No certification qualifiers associated with this analysis

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje	ect ID:	L9483		
ZS000001Z9	Date Rec	eived: 0	05/30/2012 09:34		
	Receive	ed By:		ksj	
	Date P	rinted:	5/3	31/2012	
Receipt Verification					
		YES	NO	NA	
1) Does this project require special handling procedures such as CLP protocol?				Х	
2) Are the custody seals on the cooler intact?		Х			
3) Are the custody seals on the sample containers intact?				Х	
4) Is there a Chain of Custody or other directive shipping papers present?		Х			
5) Is the Chain of Custody complete?		Х			
6) Is the Chain of Custody in agreement with the samples received?		Х			
7) Is there enough sample for all requested analyses?		Х			
8) Are all samples within holding times for requested analyses?		Х			
9) Were all sample containers received intact?		Х			
10) Are the temperature blanks present?				Х	
11) Are the trip blanks (VOA and/or Cyanide) present?				Х	
12) Are samples requiring no headspace, headspace free?				Х	

13) Do the samples that require a Foreign Soils Permit have one?

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

The client was not contacted.

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
3751	5.1	15

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

Notes

Х

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID: L94836 Date Received: 05/30/2012 09:34 Received By: ksj Date Printed: 5/31/2012

Sample Container Preservation

SAMPLE CL	IENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID			
L94836-01 H/									Х							
Sample Cor	ntainer Preservation Leg	end														
Abbreviation	Description	Contain	er Type	e Pr	eservativ	/e/Limit	s									
R	Raw/Nitric	RED		pН	pH must be < 2											
В	Filtered/Sulfuric	BLUE		pН	pH must be < 2											
BK	Filtered/Nitric	BLACK		pН	pH must be < 2											
G	Filtered/Nitric	GREEN		pН	pH must be < 2											
0	Raw/Sulfuric	ORANG	E	pН	pH must be < 2											
Р	Raw/NaOH	PURPLE	1	рH	pH must be > 12 *											
Т	Raw/NaOH Zinc Acetate	TAN		рH	pH must be > 12											
Y	Raw/Sulfuric	YELLOV	V	рH	pH must be < 2											
YG	Raw/Sulfuric	YELLOV	V GLAS	S pH	B pH must be < 2											
N/A	No preservative needed	Not appl	icable													
RAD	Gamma/Beta dose rate	Not appl	icable	mu	ist be < 2	250 µR/ł	٦r									

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

Report to:									
Name: Jon Anderson			Addres	s: 620	0 W. Duv	al Mine	Road		
Company: Freeport-McM				en Valley					
E-mail: jonathan_anderson			Teleph		20-393-2				
Copy of Report to:			_			-			
Name: Ben Daigneau			E-mail	bdaig	neau@cl	earcreek	associates.	com	
Company: Clear Creek As	ssociates				20-622-3				
Invoice to:								-	
Name:			Addres	SS:					
Company:	. .	-	,						
E-mail:	. <u></u>		Teleph	none:					• •
	olding time (HT), or if insuffic				ete			/ES	
analysis before expiration,	shall ACZ proceed with reques	sted short l	HT anal	yses?				NO	
If "NO" then ACZ will contain is indicated. ACZ will proce	ct client for further instruction ed with the requested analyse	i. It neither s, even if ⊦	∵rES" IT is ex	nor "N pired. a	ມ nd data w	ill be qua	lified.		
Are samples for CO DW Col							'n	YES	
If yes, please include state	forms. Results will be reporte	d to PQL.						NO X	
PROJECT INFORMATIO	N				SES REQ	UESTED	(attach list d	or use quo	ote numbér
Quote #: Project/PO #: ZS000001Z9 Reporting state for compliance testing:			s l	EPA 375					
			iner	or EP.					
			of Containers	300 6					
Sampler's Name:				EPA 300					
	ensable material? Yes No		*	SO4 by					
SAMPLE IDENTIFICAT		Matrix		й Х				-+-	
HAVENGOLF	5/29/12 : 0952	GW		<u>^</u>					
			<u> </u>						
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			<u> </u>				-† †		
				<u> </u>					<u> </u>
						_			
Matrix SW (Surface Wate	r) · GW (Ground Water) · WW (Was	te Water) · D\	I V (Drinki	ng Wate) · SL (Slud	ge) · SO (S	oil) · OL (Oil) ·	Other (Spe	cify)
REMARKS						-			
	754 33 1000 9071								
UPS Tracking #1Z 867	/E4 23 1000 8071								
/	Please refer to ACZ's terms	s & conditiv	nns loc	ated or	the reve	rse side (of this COC).	
RELINQUISHE					RECEIVE				ATE:TIME

White - Return with sample. Yellow - Retain for your records.



Analytical Report

June 11, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L94876

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 01, 2012. This project has been assigned to ACZ's project number, L94876. 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 L94876. 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 July 11, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-11

ACZ Sample ID: L94876-01 Date Sampled: 05/30/12 13:07 Date Received: 06/01/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/06/12 4:29	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.003	В	mg/L	0.001	0.004	06/06/12 4:29	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/06/12 4:29	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/06/12 4:29	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/05/12 3:59	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/05/12 3:59	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/05/12 3:59	jjc
Lead, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/06/12 4:29	pmc
Magnesium, dissolved	M200.7 ICP	104		mg/L	0.2	1	06/05/12 3:59	jjc
Molybdenum, dissolve	d M200.7 ICP	0.01	В	mg/L	0.01	0.05	06/05/12 3:59	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	06/06/12 4:29	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0020		mg/L	0.0002	0.0005	06/06/12 4:29	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/06/12 4:29	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В	mg/L	0.1	0.5	06/07/12 17:38	mla
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.22		mg/L	0.02	0.1	06/09/12 0:27	pjb
Residue, Filterable (TDS) @180C	SM2540C	2530		mg/L	10	20	06/01/12 15:15	jad
Sulfate	D516-02 - Turbidimetric	1440	*	mg/L	50	300	06/07/12 16:10	lhb



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refe	erences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Antimony, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.02		.02073	mg/L	103.7	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0012	0.0012			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.01		.01008	mg/L	100.8	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.01	.0022	.01141	mg/L	92.1	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.01	.0022	.01156	mg/L	93.6	70	130	1.31	20	
Arsenic, dissolv	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05347	mg/L	106.9	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0015	0.0015			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.05098	mg/L	101.9	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0858	.1366	mg/L	101.5	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0858	.1369	mg/L	102.1	70	130	0.22	20	
Beryllium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.04743	mg/L	94.9	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.0501		.04939	mg/L	98.6	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.0501	.0003	.04891	mg/L	97	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.0501	.0003	.04828	mg/L	95.8	70	130	1.3	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05148	mg/L	103	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.0501		.05058	mg/L	101	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.0501	.0003	.05019	mg/L	99.6	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.0501	.0003	.04941	mg/L	98	70	130	1.57	20	
Chromium, dise	solved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		1.984	mg/L	99.2	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.514	mg/L	102.8	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.512	mg/L	102.4	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.517	mg/L	103.4	85	115	0.97	20	

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

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L94876

Cobalt, dissolve	əd		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		2.021	mg/L	101.1	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.507	mg/L	101.4	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.512	mg/L	102.4	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.51	mg/L	102	85	115	0.39	20	
Copper, dissolv	ved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		1.996	mg/L	99.8	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.509	mg/L	101.8	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.514	mg/L	102.8	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.515	mg/L	103	85	115	0.19	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323998													
WG323998ICV	ICV	06/07/12 12:54	WC120605-	2.002		1.96	mg/L	97.9	95	105			
WG323998ICB	ICB	06/07/12 13:00				U	mg/L		-0.3	0.3			
WG324011													
WG324011ICV	ICV	06/07/12 16:34	WC120605-	2.002		1.96	mg/L	97.9	95	105			
WG324011ICB	ICB	06/07/12 16:40				U	mg/L		-0.3	0.3			
WG324011LFB1	LFB	06/07/12 16:47	WC120601-	5.005		4.8	mg/L	95.9	90	110			
L94827-03AS	AS	06/07/12 16:55	WC120601-	5.005	1.2	5.94	mg/L	94.7	90	110			
L94827-03DUP	DUP	06/07/12 16:58			1.2	1.16	mg/L				3.4	20	
WG324011LFB2	LFB	06/07/12 18:52	WC120601-	5.005		4.82	mg/L	96.3	90	110			
Lead, dissolved	I		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05165	mg/L	103.3	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.05062	mg/L	101.1	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0009	.05197	mg/L	102	70	130			

M200.7 ICP Magnesium, dissolved ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual WG323782 WG323782ICV ICV 06/05/12 3:29 II120430-3 100 101.08 mg/L 101.1 95 105 WG323782ICB ICB 06/05/12 3:35 U mg/L -0.6 0.6 WG323782LFB LFB 06/05/12 3:47 II120509-2 50.007 51.04 mg/L 102.1 85 115 L94872-01AS AS 06/05/12 3:53 II120509-2 50.007 1.5 52.81 mg/L 102.6 85 115 L94872-01ASD ASD 06/05/12 3:56 II120509-2 50.007 1.5 53.15 mg/L 103.3 85 115 0.64 20

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		2.025	mg/L	101.3	95	105			
WG323782ICB	ICB	06/05/12 3:35				.012	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.524	mg/L	104.8	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.523	mg/L	104.6	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.524	mg/L	104.8	85	115	0.19	20	
Nickel, dissolved	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05021	mg/L	100.4	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0018	0.0018			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.04835	mg/L	96.6	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0199	.06325	mg/L	86.6	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0199	.06335	mg/L	86.8	70	130	0.16	20	
Nitrate/Nitrite as	Ν		M353.2 - H	H2SO4 pre	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324110													
WG324110ICV	ICV	06/08/12 21:58	WI120405-3	2.416		2.365	mg/L	97.9	90	110			
WG324110ICB	ICB	06/08/12 21:59				U	mg/L		-0.06	0.06			
WG324114													
WG324114LFB1	LFB	06/08/12 23:59	WI120211-3	2		2.007	mg/L	100.4	90	110			
L94790-01AS	AS	06/09/12 0:18	WI120211-3	2	1.68	3.688	mg/L	100.4	90	110			
L94790-02DUP	DUP	06/09/12 0:20			.57	.563	mg/L				1.2	20	
WG324114LFB2	LFB	06/09/12 0:33	WI120211-3	2		1.961	mg/L	98.1	90	110			
Residue, Filteral	ble (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323712													
WG323712PBW	PBW	06/01/12 15:00				U	mg/L		-20	20			
WG323712LCSW	LCSW	06/01/12 15:01	PCN39025	260		250	mg/L	96.2	80	120			
L94878-02DUP	DUP	06/01/12 15:23			110	104	mg/L				5.6	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05349	mg/L	107	90	110			
WG323864ICB	ICB	06/06/12 3:31				.00040 U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.0504	mg/L	100.7	85	115			
		06/06/12 4:23	MS120531-3	.05005	.0019	.05632	mg/L	108.7	70	130			
L94854-02AS	AS	00/00/12 4.23	101200010	.00000	.0019	.03032	IIIQ/L		10				

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324024													
WG324024ICB	ICB	06/07/12 11:53				U	mg/L		-3	3			
WG324024ICV	ICV	06/07/12 11:53	WI120607-1	20		19.8	mg/L	99	90	110			
WG324024LFB	LFB	06/07/12 15:46	WI120508-1	10		10.2	mg/L	102	90	110			
L94852-02AS	AS	06/07/12 15:46	WI120508-1	10	3	14.8	mg/L	118	90	110			M
L94852-01DUP	DUP	06/07/12 16:31			U	U	mg/L				0	20	R
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05287	mg/L	105.7	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.05168	mg/L	103.3	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0005	.05399	mg/L	106.9	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0005	.0534	mg/L	105.7	70	130	1.1	20	



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

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94876-01	WG324024	Sulfate	D516-02 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L94876

No certification qualifiers associated with this analysis

AGE Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L94876
ZS000001Z9	Date Rec		5/01/201	
	Receive	ed By:		ksj
	Date Pr	inted:	6	6/1/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
3188	3.1	14

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L94876
Date Received:	06/01/2012 10:17
Received By:	ksj
Date Printed:	6/1/2012

Sample Container Preservation

SAMPLE 0	CLIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94876-01	MH-11			Y		Y							
Sample Co	ontainer Preservation Leg	end											
Abbreviation	Description	Contai	ner Typ	e Pr	eservativ	/e/Limit	ts						
R	Raw/Nitric	RED		p⊢	l must be	< 2							
В	Filtered/Sulfuric	BLUE	BLUE		pH must be < 2								
BK	Filtered/Nitric	BLACK	BLACK		pH must be < 2								
G	Filtered/Nitric	GREEN	GREEN		pH must be < 2								
0	Raw/Sulfuric	ORANO	ORANGE		l must be	< 2							
Р	Raw/NaOH	PURPL	.E	p⊢	l must be	> 12 *							
Т	Raw/NaOH Zinc Acetate	TAN	TAN		l must be	> 12							
Y	Raw/Sulfuric	YELLOW		p⊢	pH must be < 2								
YG	Raw/Sulfuric	YELLO	YELLOW GLASS		S pH must be < 2								
N/A	No preservative needed	Not app	olicable										
RAD	Gamma/Beta dose rate	Not app	olicable	mu	ust be < 2	250 µR/ł	nr						

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

Company: Freeport-McMoRan Sierrita Inc. Green Valley, AZ 85614 E-mail: jonathan_anderson@fmi.com Telephone: 520-393-2714 Company: Clear Creek Associates E-mail: bdaigneau@clearcreekassociates.com Company: Clear Creek Associates Telephone: 520-622-3222 Invotec to. Address: Company: Address:	Report to: Nonce Ten Anderson			T			D	T				
E-mail: Jonathan_anderson@fmi.com Telephone: 520-393-2714 Chay of Repert to: E-mail: bdaigneau@clearcreekassociates.com Company: Clear Creek Associates Telephone: 520-622-3222 Invoice to: Address: Company: E-mail: bdaigneau@clearcreekassociates.com Telephone: 520-622-3222 Invoice to: Address: Company: E-mail: E-mail: Telephone: f sample(s) received past holding time (HT), or if insufficient HT remains to complete YES analysis before expiration, shall ACZ proceed with requested short HT analyses? NO f *NO* then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO s indicated, AC2 will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? YES r (ys.please include state forms. Results will be reported to PQL. NO Project/PO #: ZS000001z9 Yes No Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No Yes No Sampler's Name: Yes No Are any samples NRC licensable material? Yes No Sampler's Name: <	Name: Jon Anderson	······································	—	Addre								
Copy of Report to: Name: Ben Daigneau Company: Clear Creek Associates Invoite to: Name: Company: Clear Creek Associates Invoite to: Name: Company: E-mail: bit contact client for further instruction. f 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? f 'NO' then ACZ will contact client for further instruction. If neither "YES" nor "NO" s indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? f yes, please include state forms. Results will be reported to PQL. PROJECT INF ORMATION Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPL F, IDF NHFICATION DATESTIME			—						14			
Name: E-mail: bdaigneau@clearcreekassociates.com Company: Clear Creek Associates Telephone: 520-622-3222 Invote to. Address: Company: E-mail: bdaigneau@clearcreekassociates.com Name: Address: Company: E-mail: E-mail: Address: Company: E-mail: E-mail: Address: Company: Telephone: F 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? NO f 'NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO s indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. Atre samples for CO DW Compliance Monitoring? f yes, please include state forms. Results will be reported to PQL. NO X PROJE CT INFORMATION ANALYST STED CHERNER & Company: NO Quote #: Project/PO #: ZS000001z9 Totage of the compliance testing: Totage of the compliance testing: Sampler's Name: No X YES NO YES NO Stampler's Name: No X YES NO YES NO		TSON@IIII.com		Telep	hone:	520-39	3-2714	1 				_
Company: Clear Creek Associates Telephone: 520-622-3222 Invoise to. Name: Address: Company: Image: Company: E-mail: Telephone: f sample(s) received past holding time (HT), or if insufficient HT remains to complete yes analysis before expiration, shall ACZ proceed with requested short HT analyses? NO f 'NO' then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO s indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. NO Are samples for CO DW Compliance Monitoring? YES NO f yes, please include state forms. Results will be reported to PQL. NO X PROJE C LINF ORMATION ANALYSI S REQUESTED SITE D Control list of one protecting: NO X Reporting state for compliance testing: Sampler's Name: Yes No NO X Are any samples NRC licensable material? Yes No To Statel I. IDF. NTIFICATION DA FEETIME Memma To Statel I. IDF. NTIFICATION NO To Statel I. IDF. NTIFICATION NO To Statel I. IDF. NTIFICATION NO To Statel I. IDF. NTIFICATION Image: State I. IDF.												
Involted to. Name: Company: E-mail: f sample(s) received past holding time (HT), or if insufficient HT remains to complete f 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? f 'NO' then ACZ will contact client for further instruction. If neither "YES" nor "NO" s indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? f yes, please include state forms. Results will be reported to PQL. PROJE CT INFORMATION Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE. IDE NTIFICATION DATE:TIME									ssociat	es.com	<u> </u>	
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Company:	Invoice to:											
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f sample(s) received past holding time (HT), or if insufficient HT remains to complete YES analysis before expiration, shall ACZ proceed with requested short HT analyses? NO f *NO* then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO s indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. NO Are samples for CO DW Compliance Monitoring? YES f yes, please include state forms. Results will be reported to PQL. NO PROJE CT INFORMATION ANALYSE STER QUE S	Company:											
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f yes, please include state forms. Results will be reported to PQL. PROJECTINFORMATION ANALYSIS REQUESTED officient list or use quark must Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE. IDE.NTIFICATION DATE:TIME Matrix NO X							a will b	e qualif	fied.			
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FRMAD050.01.15.09

White - Return with sample. Yellow - Retain for your records.



Analytical Report

June 21, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L95049

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 08, 2012. This project has been assigned to ACZ's project number, L95049. 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 L95049. 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 July 21, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





June 21, 2012

Project ID: ZS000001Z9 ACZ Project ID: L95049

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 4 ground water samples from FMI Gold & Copper - Sierrita on June 8, 2012. 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 L95049. 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 parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. The Total Dissolved Solids results have been qualified with the N1 flag on the extended qualifier report. The chemist noted that the drying oven dropped to 78.3 degrees for approximately 2 hours due to a powere outage on 6/9/12.



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-10

ACZ Sample ID: L95049-01 Date Sampled: 06/05/12 17:25 Date Received: 06/08/12 Sample Matrix: Ground Water

Metals Analysis									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/20/12 9:37	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	В		mg/L	0.001	0.004	06/18/12 14:39	msh
Beryllium, dissolved	M200.8 ICP-MS		U	*	mg/L	0.0002	0.001	06/18/12 14:39	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/18/12 14:39	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/12/12 14:33	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/12/12 14:33	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/12/12 14:33	jjc
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/18/12 14:39	msh
Magnesium, dissolved	M200.7 ICP	96.3			mg/L	0.4	2	06/12/12 14:33	jjc
Molybdenum, dissolved	d M200.7 ICP	0.04	В		mg/L	0.02	0.1	06/12/12 14:33	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/18/12 14:39	msh
Selenium, dissolved	M200.8 ICP-MS	0.0006		*	mg/L	0.0002	0.0005	06/18/12 14:39	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/18/12 14:39	msh
Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В	*	mg/L	0.1	0.5	06/14/12 13:38	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.24			mg/L	0.02	0.1	06/20/12 0:43	pjb
Residue, Filterable (TDS) @180C	SM2540C	2730		*	mg/L	10	20	06/08/12 16:28	mla
Sulfate	D516-02 - Turbidimetric	1500			mg/L	100	500	06/18/12 15:31	tcd

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Project ID:	ZS000001Z9
Sample ID:	PZ-7

ACZ Sample ID: L95049-02 Date Sampled: 06/06/12 09:52 Date Received: 06/08/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	489.1		*	mg/L	5	25	06/14/12 5:44	jlf

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	GV-1

ACZ Sample ID: L95049-03 Date Sampled: 06/07/12 09:02 Date Received: 06/08/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.87		*	mg/L	0.5	2.5	06/14/12 6:05	jlf

ACZ	Laboratorie	s, Inc.
	Steamboat Springs, CO	•

ACZ Sample ID: L95049-04

FMI Gold & Copper- SierritaProject ID:ZS000001Z9

Project ID:	ZS000001Z9	Date Sampled:	06/07/12 09:49
Sample ID:	GV-2	Date Received:	06/08/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	71.78	*	mg/L	0.5	2.5	06/14/12 6:26	jlf



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Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refe	erences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Antimony, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324739													
WG324739ICV	ICV	06/20/12 9:17	MS120604-5	.02		.0186	mg/L	93	90	110			
WG324739ICB	ICB	06/20/12 9:20				U	mg/L		-0.0012	0.0012			
WG324739LFB	LFB	06/20/12 9:24	MS120531-3	.01		.00911	mg/L	91.1	85	115			
L95056-13AS	AS	06/20/12 9:50	MS120531-3	.05	.003	.0475	mg/L	89	70	130			
L95056-13ASD	ASD	06/20/12 10:00	MS120531-3	.05	.003	.047	mg/L	88	70	130	1.06	20	
Arsenic, dissolv	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05146	mg/L	102.9	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0015	0.0015			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05087	mg/L	101.6	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.06494	mg/L	129.8	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.06371	mg/L	127.3	70	130	1.91	20	
Beryllium, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.048	mg/L	96	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.0501		.04662	mg/L	93.1	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.0501	U	.04431	mg/L	88.4	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.0501	U	.04354	mg/L	86.9	70	130	1.75	20	
Cadmium, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05236	mg/L	104.7	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.0501		.05201	mg/L	103.8	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.0501	U	.05008	mg/L	100	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.0501	U	.04843	mg/L	96.7	70	130	3.35	20	
Chromium, diss	solved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		1.943	mg/L	97.2	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.488	mg/L	97.6	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.479	mg/L	95.8	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.48	mg/L	96	85	115	0.21	20	

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Inorganic QC Summary

ACZ Project ID: L95049

Project ID:

ZS000001Z9

FMI Gold & Copper - Sierrita

Cobalt, dissolve			M200.7 IC		0	-					-	1	0-1-
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		2	mg/L	100	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.489	mg/L	97.8	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.479	mg/L	95.8	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.483	mg/L	96.6	85	115	0.83	20	
Copper, dissolv	ved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		1.996	mg/L	99.8	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.5	mg/L	100	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.511	mg/L	102.2	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.511	mg/L	102.2	85	115	0	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324406													
WG324406ICV	ICV	06/14/12 12:32	WC120613-	2.002		1.96	mg/L	97.9	95	105			
WG324406ICB	ICB	06/14/12 12:39				U	mg/L		-0.3	0.3			
WG324406LFB1	LFB	06/14/12 12:46	WC120601-	5.005		4.93	mg/L	98.5	90	110			
L94896-01AS	AS	06/14/12 12:54	WC120601-	5.005	.7	5.26	mg/L	91.1	90	110			
L94896-01DUP	DUP	06/14/12 12:57			.7	.66	mg/L				5.9	20	R
WG324406LFB2	LFB	06/14/12 15:56	WC120601-	5.005		4.95	mg/L	98.9	90	110			
Lead, dissolved	l		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05333	mg/L	106.7	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05236	mg/L	104.6	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.05603	mg/L	111.9	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.05437	mg/L	108.6	70	130	3.01	20	
Magnesium, dis	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	100		101.15	mg/L	101.2	95	105			
	ICB	06/12/12 12:59				U	mg/L		-0.6	0.6			
WG324206ICB							-	101 1					
	LFB	06/12/12 13:11	II120606-2	50.007		50.56	mg/L	101.1	85	115			
WG324206ICB WG324206LFB L94980-08AS	LFB AS	06/12/12 13:11 06/12/12 14:02	II120606-2 II120606-2	50.007 50.007	17.9	50.56 68.33	mg/L mg/L	101.1	85	115			

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		2.013	mg/L	100.7	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.501	mg/L	100.2	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.496	mg/L	99.2	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.498	mg/L	99.6	85	115	0.4	20	
Nickel, dissolve			M200.8 IC										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05319	mg/L	106.4	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0018	0.0018			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.04996	mg/L	99.8	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.05064	mg/L	101.2	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.05006	mg/L	100	70	130	1.15	20	
Nitrate/Nitrite as	Ν		M353.2 - I	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324759													
WG324759ICV	ICV	06/19/12 23:48	WI120405-3	2.416		2.35	mg/L	97.3	90	110			
WG324759ICB	ICB	06/19/12 23:49				U	mg/L		-0.06	0.06			
WG324761													
WG324761LFB	LFB	06/20/12 0:26	WI120211-3	2		1.99	mg/L	99.5	90	110			
L94896-01AS	AS	06/20/12 0:28	WI120211-3	2	U	2.125	mg/L	106.3	90	110			
L95031-01DUP	DUP	06/20/12 0:31			.31	.308	mg/L				0.6	20	
Residue, Filteral	ole (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324097													
WG324097PBW	PBW	06/08/12 15:50				U	mg/L		-20	20			
WG324097LCSW	LCSW	06/08/12 15:51	PCN39026	260		248	mg/L	95.4	80	120			
L95049-01DUP	DUP	06/08/12 16:29			2730	2730	mg/L				0	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05269	mg/L	105.4	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05104	mg/L	102	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.06522	mg/L	130.3	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.0669	mg/L	133.7	70	130	2.54	20	MA

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324631													
WG324631ICB	ICB	06/18/12 9:24				U	mg/L		-3	3			
WG324631ICV	ICV	06/18/12 9:24	WI120607-1	20		18.6	mg/L	93	90	110			
WG324631LFB	LFB	06/18/12 15:04	WI120508-1	10		9.6	mg/L	96	90	110			
L95034-02DUP	DUP	06/18/12 15:24			3100	3180	mg/L				2.5	20	
L95034-03AS	AS	06/18/12 15:24	SO4TURB10	100	3200	3310	mg/L	110	90	110			
Sulfate			M300.0 - I	on Chrom	natography	1							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323820													
WG323820ICV	ICV	06/05/12 11:58	WI120406-1	50.15		51.04	mg/L	101.8	90	110			
WG323820ICB	ICB	06/05/12 12:19				U	mg/L		-1.5	1.5			
WG324325													
WG324325LFB	LFB	06/13/12 20:56	WI120312-2	30		30.38	mg/L	101.3	90	110			
L95001-05DUP	DUP	06/14/12 2:34			U	U	mg/L				0	20	RA
L95023-01AS	AS	06/14/12 3:16	WI120312-2	150	125.94	276.29	mg/L	100.2	90	110			
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05376	mg/L	107.5	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05273	mg/L	105.4	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.05617	mg/L	112.2	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.05456	mg/L	109	70	130	2.91	20	



(800) 334-5493

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95049-01	WG324508	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
		Selenium, dissolved	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG324406	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG324097	Residue, Filterable (TDS) @180C	SM2540C	N1	See Case Narrative.
L95049-02	WG324325	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95049-03	WG324325	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95049-04	WG324325	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L95049

No certification qualifiers associated with this analysis

AGE Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita ZS000001Z9	ACZ Proje Date Rec		2/09/201	L95049
2300000129	Receive		5/00/20	ksj
		•	0	•
	Date Pr	initea.	C	6/8/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
3305	1.5	14

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

Notes

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L95049
Date Received:	06/08/2012 12:07
Received By:	ksj
Date Printed:	6/8/2012

Sample Container Preservation

SAMPLE	CLIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID				
L95049-01	MH-10			Y		Y											
L95049-02	PZ-7										Х						
L95049-03	GV-1										Х						
L95049-04	GV-2										Х						
Sample C	Sample Container Preservation Legend																
Abbreviatio	tion Description Contain		ner Typ	e Pr	eservativ	ve/Limi	ts										
R	Raw/Nitric	RED	RED		pH must be < 2												
В	Filtered/Sulfuric	BLUE		p⊢	pH must be < 2												
BK	Filtered/Nitric	BLACK		p⊢	pH must be < 2												
G	Filtered/Nitric	GREEN	1	p⊢	pH must be < 2												
0	Raw/Sulfuric	ORANO	θE	p⊢	l must be	e < 2											
Р	Raw/NaOH	PURPL	E	p⊢	pH must be > 12 *												
Т	Raw/NaOH Zinc Acetate	TAN		p⊢	pH must be > 12												
Y	Raw/Sulfuric	YELLO	W	p⊢	pH must be < 2												
YG	Raw/Sulfuric	YELLOW GLASS		SS p⊢	pH must be < 2												
N/A	No preservative needed	ed Not applicable															
RAD			mu	ust be < 2	250 µR/	hr											

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

2773 Downhill Drive	Laboratories, Inc. Steamboat Springs, CO 80487 (800) 33	14-5493	$^{\prime\prime}$	0r	M		C	CHA	N of	CUS	STOD	Y
Report to:		ł	1		,							
Name: Jon Ander			Address: 6200 W. Duval Mine Road									
	Company: Freeport-McMoRan Sierrita Inc. E-mail: jonathan_anderson@FMI.COM			Green Valley, AZ 85614 Telephone: 520-393-2714								
			Telep	hone:	520-39	3-2714	}					
Copy of Report t			r								_	
Name: Ben Daig		-		I: bdaig				ssociat	es.com			
Company: Clear C	Creek Associates		Telep	hone: :	520-62	2-3222	2					
Invoice to			,									
Name:			Addre	SS:				<u> </u>				
Company:			<u> </u>									
E-mail:			Telep							1		
	ed past holding time (HT), or if insufficie piration, shall ACZ proceed with reques				ete				YES NO			
	ill contact client for further instruction.			-	O"				NC/	لـــــا		
	ill proceed with the requested analyses	s, even if l	⊣⊺ is e>	pired, a	and data	a will be	e qualif	ied.				
	DW Compliance Monitoring?								YES			
PROJECT INFOR	te state forms. Results will be reported	to PQL.		ANALY	SES RI	FOUES	TED <i>(a</i>	ttach le	NO storus	🗶 e quote i	nunben	
Quote #:							- 					
Project/PO #: ZS0	0000170	-	srs		λ							
	r compliance testing:		of Containers		-l-i							
Sampler's Name:			Sont	ate	ц							
	NRC licensable material? Yes No	-	of C	Sulfate	Quarterly							
SAMPLE IDENT		Matrix	#	ิง	ō			ſ	[
MH-10	6/5/2012 : 1725	GW	3		×				<u> </u>			
PZ-7	6/6/2012 : 0952	GW	1	×								
GV- 1	6/7/2012 : 0902	GW	1	×								
GV-2	6/7/2012 : 0949	GW	1	×								
<u>کړ</u>												
Matrix SW (Surf	ace Water) · GW (Ground Water) · WW (Waste	Water) · DV	V (Drinki	ng Water) · SL (SI	udge) · S	O (Soit)	· OL (Oil) · Other	(Specify)	······································	
	Z 867 7E4 23 1000 8053	conditio	ns loca	ated on	the rev	verse si	ide of t	his CC	DC.			
RELINC	UISHED BY: DATE:1					ED BY			_	DATE	:TIME	
ALEXIS ALVAR				Ne	- (6/8	/17	,		120		
1			ł									



Analytical Report

June 27, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L95164

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 15, 2012. This project has been assigned to ACZ's project number, L95164. 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 L95164. 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 July 27, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-13B

ACZ Sample ID: L95164-01 Date Sampled: 06/11/12 13:32 Date Received: 06/15/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	06/22/12 3:22	pmc
Arsenic, dissolved	M200.8 ICP-MS		U	mg/L	0.0005	0.002	06/22/12 3:22	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/19/12 15:38	aeb
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/19/12 15:38	aeb
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/19/12 15:38	aeb
Lead, dissolved	M200.8 ICP-MS	0.0002	В	mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Magnesium, dissolved	M200.7 ICP	57.3		mg/L	0.2	1	06/19/12 15:38	aeb
Molybdenum, dissolve	d M200.7 ICP		U	mg/L	0.01	0.05	06/20/12 2:01	aeb
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	06/22/12 3:22	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0023		mg/L	0.0001	0.0003	06/22/12 3:22	ртс
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В *	mg/L	0.1	0.5	06/19/12 15:52	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.08	В *	mg/L	0.02	0.1	06/23/12 14:37	pjb
Residue, Filterable (TDS) @180C	SM2540C	1950		mg/L	10	20	06/15/12 15:46	jad
Sulfate	D516-02 - Turbidimetric	1020	*	mg/L	50	300	06/26/12 14:20	jlf



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-13A

ACZ Sample ID: L95164-02 Date Sampled: 06/11/12 15:08 Date Received: 06/15/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XC	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/22/12 3:25	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.004	06/22/12 3:25	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/22/12 3:25	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/22/12 3:25	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/19/12 15:41	aeb
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/19/12 15:41	aeb
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/19/12 15:41	aeb
Lead, dissolved	M200.8 ICP-MS	0.0006	В	mg/L	0.0002	0.001	06/22/12 3:25	pmc
Magnesium, dissolved	M200.7 ICP	111		mg/L	0.4	2	06/19/12 15:41	aeb
Molybdenum, dissolved	d M200.7 ICP		U	mg/L	0.02	0.1	06/20/12 2:11	aeb
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	06/22/12 3:25	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0017		mg/L	0.0002	0.0005	06/22/12 3:25	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/22/12 3:25	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XC	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.1	В *	mg/L	0.1	0.5	06/19/12 15:55	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved		U *	mg/L	0.02	0.1	06/23/12 14:38	pjb
Residue, Filterable (TDS) @180C	SM2540C	3040		mg/L	10	20	06/15/12 15:47	jad
Sulfate	D516-02 - Turbidimetric	1680	*	mg/L	50	300	06/26/12 14:25	jlf



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	MH-13C

ACZ Sample ID: L95164-03 Date Sampled: 06/11/12 15:55 Date Received: 06/15/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	06/22/12 3:28	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0083		mg/L	0.0005	0.002	06/22/12 3:28	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/19/12 15:44	aeb
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/19/12 15:44	aeb
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/19/12 15:44	aeb
Lead, dissolved	M200.8 ICP-MS	0.0001	В	mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Magnesium, dissolved	M200.7 ICP	0.9	В	mg/L	0.2	1	06/19/12 15:44	aeb
Molybdenum, dissolved	d M200.7 ICP	0.23		mg/L	0.01	0.05	06/20/12 2:14	aeb
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	06/22/12 3:28	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0001	В	mg/L	0.0001	0.0003	06/22/12 3:28	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	1.2	*	mg/L	0.1	0.5	06/19/12 15:58	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.10	B *	mg/L	0.02	0.1	06/23/12 14:40	pjb
Residue, Filterable (TDS) @180C	SM2540C	240		mg/L	10	20	06/15/12 15:48	jad
Sulfate	D516-02 - Turbidimetric	50	*	mg/L	5	30	06/26/12 14:15	jlf



Project ID:	ZS000001Z9
Sample ID:	MO-2007-6A

ACZ Sample ID: L95164-04 Date Sampled: 06/12/12 09:08 Date Received: 06/15/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.98		*	mg/L	0.5	2.5	06/22/12 0:03	сср



Project ID:	ZS000001Z9
Sample ID:	MO-2007-6B

ACZ Sample ID: L95164-05 Date Sampled: 06/12/12 11:00 Date Received: 06/15/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	55.99		*	mg/L	0.5	2.5	06/22/12 0:24	сср



Project ID:	ZS000001Z9
Sample ID:	MO-2007-1B

ACZ Sample ID: L95164-06 Date Sampled: 06/12/12 14:22 Date Received: 06/15/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	766.0		*	mg/L	5	25	06/22/12 15:10) сср



Project ID:	ZS000001Z9
Sample ID:	MO-2007-1A

ACZ Sample ID: L95164-07 Date Sampled: 06/12/12 15:14 Date Received: 06/15/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	16.98		*	mg/L	0.5	2.5	06/22/12 1:06	сср



Project ID:	ZS000001Z9
Sample ID:	MO-2007-1C

ACZ Sample ID: L95164-08 Date Sampled: 06/12/12 16:32 Date Received: 06/15/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	406.4		*	mg/L	5	25	06/22/12 1:27	сср



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Antimony, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.02		.01957	mg/L	97.9	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0012	0.0012			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.01		.00945	mg/L	94.5	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.01	U	.01007	mg/L	100.7	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.01	U	.01015	mg/L	101.5	70	130	0.79	20	
Arsenic, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05206	mg/L	104.1	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0015	0.0015			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04881	mg/L	97.5	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.05334	mg/L	106.6	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.05348	mg/L	106.9	70	130	0.26	20	
Beryllium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.04707	mg/L	94.1	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.0501		.04497	mg/L	89.8	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.0501	U	.04877	mg/L	97.3	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.0501	U	.04824	mg/L	96.3	70	130	1.09	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05032	mg/L	100.6	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.0501		.0479	mg/L	95.6	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.0501	U	.05049	mg/L	100.8	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.0501	U	.05082	mg/L	101.4	70	130	0.65	20	
Chromium, dis	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	2		1.996	mg/L	99.8	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.03	0.03			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	.5		.513	mg/L	102.6	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	.5	U	.525	mg/L	105	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	.5	U	.529	mg/L	105.8	85	115	0.76	20	
-													

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

ACZ Project ID: L95164

Project ID:

ZS000001Z9

FMI Gold & Copper - Sierrita

Cobalt, dissolve	ed		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	2		1.979	mg/L	99	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.03	0.03			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	.5		.502	mg/L	100.4	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	.5	U	.524	mg/L	104.8	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	.5	U	.52	mg/L	104	85	115	0.77	20	
Copper, dissolv	ed		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	2		1.993	mg/L	99.7	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.03	0.03			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	.5		.524	mg/L	104.8	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	.5	U	.525	mg/L	105	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	.5	U	.532	mg/L	106.4	85	115	1.32	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324680													
WG324680ICV	ICV	06/19/12 12:16	WC120618-	2.002		1.9	mg/L	94.9	95	105			
WG324680ICB	ICB	06/19/12 12:22				U	mg/L		-0.3	0.3			
WG324680LFB1	LFB	06/19/12 12:31	WC120601-	5.005		4.76	mg/L	95.1	90	110			
WG324680LFB2	LFB	06/19/12 14:28	WC120601-	5.005		4.72	mg/L	94.3	90	110			
_95162-07DUP	DUP	06/19/12 15:45			.4	.39	mg/L				2.5	20	RA
_95162-07AS	AS	06/19/12 15:49	WC120601-	5.005	.4	5	mg/L	91.9	90	110			
Lead, dissolved			M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
VG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05107	mg/L	102.1	90	110			
VG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
VG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.0479	mg/L	95.7	85	115			
_95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.04996	mg/L	99.8	70	130			
_95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.05031	mg/L	100.5	70	130	0.7	20	
Magnesium, dis	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
	ICV	06/19/12 14:43	II120430-3	100		102.5	mg/L	102.5	95	105			
NG324694ICV		06/19/12 14:47				U	mg/L		-0.6	0.6			
	ICB					2	····9, 🛏		5.0	0.0			
WG324694ICB	ICB LFB		1120606-2	50,007		51.79	ma/L	103.6	85	115			
WG324694ICV WG324694ICB WG324694LFB L95097-01AS	LFB AS	06/19/12 15:00 06/19/12 15:10	II120606-2 II120606-2	50.007 50.007	20.6	51.79 74.9	mg/L mg/L	103.6 108.6	85 85	115 115			

462 **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324741													
WG324741ICV	ICV	06/20/12 1:40	II120430-3	2		2.037	mg/L	101.9	95	105			
WG324741ICB	ICB	06/20/12 1:46				U	mg/L		-0.03	0.03			
WG324741LFB	LFB	06/20/12 1:58	II120606-2	.5		.517	mg/L	103.4	85	115			
L95164-01AS	AS	06/20/12 2:05	II120606-2	.5	U	.53	mg/L	106	85	115			
L95164-01ASD	ASD	06/20/12 2:08	II120606-2	.5	U	.533	mg/L	106.6	85	115	0.56	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.04938	mg/L	98.8	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0018	0.0018			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04575	mg/L	91.4	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.04609	mg/L	92.1	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.04588	mg/L	91.7	70	130	0.46	20	
Nitrate/Nitrite as	N		M353.2 - I	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325064													
WG325064ICV	ICV	06/23/12 14:16	WI120405-3	2.416		2.462	mg/L	101.9	90	110			
WG325064ICB	ICB	06/23/12 14:17				U	mg/L		-0.06	0.06			
WG325064LFB	LFB	06/23/12 14:20	WI120211-3	2		2.006	mg/L	100.3	90	110			
L95159-01AS	AS	06/23/12 14:23	WI120211-3	2	.03	1.882	mg/L	92.6	90	110			
L95159-02DUP	DUP	06/23/12 14:25			U	U	mg/L				0	20	RA
L95164-02AS	AS	06/23/12 14:39	WI120211-3	2	U	2.041	mg/L	102.1	90	110	•		
L95164-03DUP	DUP	06/23/12 14:42			.1	.097	mg/L				3	20	RA
Residue, Filteral	ole (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324542													
WG324542PBW	PBW	06/15/12 15:20				U	mg/L		-20	20			
WG324542LCSW	LCSW	06/15/12 15:21	PCN39027	260		266	mg/L	102.3	80	120			
L95164-03DUP	DUP	06/15/12 15:49			240	230	mg/L				4.3	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05188	mg/L	103.8	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04481	mg/L	89.5	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.05709	mg/L	114.1	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.05655	mg/L	113	70	130	0.95	20	

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325180													
WG325180ICB	ICB	06/26/12 12:38				U	mg/L		-3	3			
WG325180ICV	ICV	06/26/12 12:38	WI120625-2	20		20.4	mg/L	102	90	110			
WG325180LFB	LFB	06/26/12 14:04	WI120508-1	10		9.7	mg/L	97	90	110			
L95159-04DUP	DUP	06/26/12 14:12			70	69.8	mg/L				0.3	20	
L95162-01AS	AS	06/26/12 14:27	SO4TURB50	10	1720	1719	mg/L	-10	90	110			M3
Sulfate			M300.0 - I	on Chrom	natography	1							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324762													
WG324762ICV	ICV	06/20/12 17:56	WI120406-1	50.15		51.1	mg/L	101.9	90	110			
WG324762ICB	ICB	06/20/12 18:18				U	mg/L		-1.5	1.5			
WG324762LFB1	LFB	06/21/12 10:20	WI120312-2	30		30.15	mg/L	100.5	90	110			
WG324762LFB2	LFB	06/21/12 20:32	WI120312-2	30		30.17	mg/L	100.6	90	110			
L95149-03DUP	DUP	06/21/12 21:14			U	U	mg/L				0	20	RA
L95149-04AS	AS	06/21/12 22:38	WI120312-2	3000	U	3032	mg/L	101.1	90	110			
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05336	mg/L	106.7	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04952	mg/L	98.9	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.05228	mg/L	104.5	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.0527	mg/L	105.3	70	130	0.8	20	



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

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95164-01	WG324680	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325064	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325180	Sulfate	D516-02 - Turbidimetric	М3	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.
L95164-02	WG324680	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325064	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325180	Sulfate	D516-02 - Turbidimetric	М3	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.
L95164-03	WG324680	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325064	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325180	Sulfate	D516-02 - Turbidimetric	М3	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.
L95164-04	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-05	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-06	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-07	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-08	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L95164

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
	Steamhaat Springs CO 90497 (900) 224 E402

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

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L95164
ZS000001Z9	Date Rece		6/15/201	
	Receive Date Pri	•	6/	ksj 15/2012
Receipt Verification	Datern	nieu.	0/	13/2012
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol	?			Х
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold tir	me analyses?	Х		
6) Is the Chain of Custody complete and accurate?			Х	
The 'sampled by' field on the Chain of Custody was r completed.	not			L
7) Were any changes made to the Chain of Custody prior to ACZ receiving the	samples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on conatiners and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, an L95164-03 Container B1219743: Mislabeled, Corrected used per chain of custody,	l		Х	
L95164-03 Container B1219744: Mislabeled, Corrected used per chain of custody,	sample ID			
11) For preserved bottle types, was the pH checked and within limits?		Х		
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?		Х		
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
Chain of Custody Related Remarks				
Client Contact Remarks				
Shipping Containers				
Cooler Id Temp (°C) Rad (µR/Hr) Cu	stody Seal Int	act?		
2631 4.9 15 Ye	s			
Client must context on AC7 Draiget Manager if analysis should not a				

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

Report to:					ł.						
Name: Jon Anderson			Addre	ess: 620	00 W. I	Duval	Mine I	Road			
Company: Freeport-Me	cMoRan Sierrita Inc.				een Va						
E-mail: jonathan_ander	son@fmi.com		Telep		520-39			<u> </u>			
Copy of Report to:											
Name: Ben Daigneau			E-ma	il: bdai	gneau(d	<i>i</i>)clear	creeka	ssociat	tes.com	l	
Company: Clear Creek	Associates				520-62						
nvoice to:									·····		
Name:			Addre	ess:							
Company:									·		
E-mail:			Telep	hone:							
	st holding time (HT), or if insuff				lete				YES		
	n, shall ACZ proceed with reques ntact client for further instruction			-	۱۵۳				NO	L	
	ceed with the requested analys					a will b	e qualif	ied.			
•	Compliance Monitoring?								YES		
f yes, please include sta PROJECT INFORMAT	te forms. Results will be report	ted to PQL.		ΔΝΙΔΙΙΝ				Hoob li	NO	×	number)
		 _						пасл н		e quote	'number)
Quote #: Project/PO #: ZS00000	170		ers.	EPA 300 or EPA 375							
Reporting state for com			Containers	ш О С							
Sampler's Name:	phance leating.		Cont	A 300	Ľ				1		
	icensable material? Yes No		of	र्व	Quarterly						
SAMPLE IDENTIFICA		Matrix	#	\$04	Ō						
MH-13B	6/11/12 : 1332	GW	3		×						
MH-13A	6/11/12 : 1508	GW	3		×						
MH-13C	6/11/12 : 1555	GW	3		×						
MO-2007-6A	6/12/12:0908	GW	1	×							
MO-2007-6B	6/12/12 : 1100	GW	1	×							
MO-2007-1B	6/12/12 : 1422	GW	1	×					L		
MO-2007-1A	6/12/12 : 1514	GW	1	×					<u> </u>		
MO-2007-1C	6/12/12 : 1632	GW	1	×							



Analytical Report

July 09, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L95293

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 22, 2012. This project has been assigned to ACZ's project number, L95293. 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 L95293. 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 August 09, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratorie	s, Inc.
	Steamboat Springs, CO	•

ACZ Sample ID: L95293-01

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9	Date Sampled:	06/18/12 13:25
Sample ID:	CW-3	Date Received:	06/22/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	61.70		mg/L	0.5	2.5	06/29/12 1:13	сср

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

ACZ Sample ID: L95293-02

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9	Date Sampled:	06/18/12 14:58
Sample ID:	NP-2	Date Received:	06/22/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	64.90		mg/L	0.5	2.5	06/29/12 1:34	сср

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - SierritaACZ Sample ID:L95293-03Project ID:ZS000001Z9Date Sampled:06/19/12 11:07Sample ID:ESP-2Date Received:06/22/12Sample Matrix:Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	27.75		mg/L	0.5	2.5	06/29/12 2:16	сср

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9	
Sample ID:	ESP-1	[
		,

ACZ Sample ID: L95293-04 Date Sampled: 06/19/12 12:04 Date Received: 06/22/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	395.72		mg/L	2.5	12.5	06/29/12 16:45	5 сср

ACZ	Laboratories	s, Inc.
	Steamboat Springs, CO 8	-

ACZ Sample ID: L95293-05

FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9	Date Sampled:	06/19/12 12:53
Sample ID:	ESP-3	Date Received:	06/22/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.98		mg/L	0.5	2.5	06/29/12 17:06	сср



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-20

ACZ Sample ID: L95293-06 Date Sampled: 06/20/12 08:15 Date Received: 06/22/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/26/12 17:44	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.001	В	mg/L	0.001	0.004	06/26/12 17:44	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:44	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:44	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:35	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:35	jjc
Copper, dissolved	M200.7 ICP	0.03	В	mg/L	0.02	0.1	06/26/12 20:35	jjc
Lead, dissolved	M200.8 ICP-MS	0.0027		mg/L	0.0002	0.001	06/26/12 17:44	pmc
Magnesium, dissolved	M200.7 ICP	125		mg/L	0.4	2	06/26/12 20:35	jjc
Molybdenum, dissolved	d M200.7 ICP	0.02	В	mg/L	0.02	0.1	06/26/12 20:35	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	06/26/12 17:44	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0011		mg/L	0.0002	0.0005	06/26/12 17:44	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:44	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В	mg/L	0.1	0.5	06/28/12 11:34	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.64		mg/L	0.02	0.1	07/04/12 0:47	pjb
Residue, Filterable (TDS) @180C	SM2540C	2880		mg/L	10	20	06/22/12 13:38	jad
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	07/02/12 16:22	tcd



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-21

ACZ Sample ID: L95293-07 Date Sampled: 06/20/12 08:39 Date Received: 06/22/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/26/12 17:47	pmc
Arsenic, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.004	06/26/12 17:47	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:47	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:47	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:38	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:38	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:38	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	В	mg/L	0.0002	0.001	06/26/12 17:47	pmc
Magnesium, dissolved	M200.7 ICP	123		mg/L	0.4	2	06/26/12 20:38	jjc
Molybdenum, dissolve	d M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:38	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	06/26/12 17:47	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0009		mg/L	0.0002	0.0005	06/26/12 17:47	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:47	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	В	mg/L	0.1	0.5	06/28/12 11:38	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.71		mg/L	0.02	0.1	07/04/12 0:48	pjb
Residue, Filterable (TDS) @180C	SM2540C	2970		mg/L	10	20	06/22/12 13:39	jad
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	500	07/02/12 16:22	tcd



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-13

ACZ Sample ID: L95293-08 Date Sampled: 06/20/12 08:53 Date Received: 06/22/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/26/12 17:57	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.004	06/28/12 7:03	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:57	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:57	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:41	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:41	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:41	jjc
Lead, dissolved	M200.8 ICP-MS	0.0006	В	mg/L	0.0002	0.001	06/28/12 7:03	pmc
Magnesium, dissolved	M200.7 ICP	117		mg/L	0.4	2	06/26/12 20:41	jjc
Molybdenum, dissolve	d M200.7 ICP	0.14		mg/L	0.02	0.1	06/26/12 20:41	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	06/26/12 17:57	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0009		mg/L	0.0002	0.0005	06/28/12 7:03	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 17:57	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В	mg/L	0.1	0.5	06/28/12 11:54	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.91		mg/L	0.02	0.1	07/04/12 0:49	pjb
Residue, Filterable (TDS) @180C	SM2540C	3290		mg/L	10	20	06/22/12 13:41	jad
Sulfate	D516-02 - Turbidimetric	1900	*	mg/L	100	500	07/02/12 16:22	tcd



FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	IW-3A

ACZ Sample ID: L95293-09 Date Sampled: 06/20/12 09:10 Date Received: 06/22/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0008	0.004	06/26/12 18:00	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.002	В	mg/L	0.001	0.004	06/28/12 7:06	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 18:00	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 18:00	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:44	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:44	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:44	jjc
Lead, dissolved	M200.8 ICP-MS		U *	mg/L	0.0002	0.001	06/26/12 18:00	pmc
Magnesium, dissolved	M200.7 ICP	115		mg/L	0.4	2	06/26/12 20:44	jjc
Molybdenum, dissolve	d M200.7 ICP		U	mg/L	0.02	0.1	06/26/12 20:44	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.001	0.006	06/26/12 18:00	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0004	В	mg/L	0.0002	0.0005	06/28/12 7:06	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0002	0.001	06/26/12 18:00	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	В	mg/L	0.1	0.5	06/28/12 11:58	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.70		mg/L	0.02	0.1	07/04/12 0:50	pjb
Residue, Filterable (TDS) @180C	SM2540C	2960		mg/L	10	20	06/22/12 13:42	jad
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	500	07/02/12 16:31	tcd



Project ID:	ZS000001Z9
Sample ID:	MO-2007-5B

ACZ Sample ID: L95293-10 Date Sampled: 06/20/12 12:20 Date Received: 06/22/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XC	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	519.3		mg/L	5	25	06/29/12 3:40	сср



Project ID: ZS000001Z9 Sample ID: RT-1

Inorganic Analytical Results

ACZ Sample ID:	L95293-11
Date Sampled:	06/19/12 08:49
Date Received:	06/22/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	06/26/12 18:03	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0092		mg/L	0.0005	0.002	06/28/12 7:10	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/26/12 18:03	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/26/12 18:03	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/26/12 20:47	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/26/12 20:47	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	06/26/12 20:47	jjc
Lead, dissolved	M200.8 ICP-MS	0.0009		mg/L	0.0001	0.0005	06/28/12 7:10	pmc
Magnesium, dissolved	M200.7 ICP	9.5		mg/L	0.2	1	06/26/12 20:47	jjc
Molybdenum, dissolve	d M200.7 ICP	0.10		mg/L	0.01	0.05	06/26/12 20:47	jjc
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	06/26/12 18:03	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0008		mg/L	0.0001	0.0003	06/28/12 7:10	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	06/26/12 18:03	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6		mg/L	0.1	0.5	06/28/12 12:02	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.92		mg/L	0.02	0.1	07/04/12 0:51	pjb
Residue, Filterable (TDS) @180C	SM2540C	330		mg/L	10	20	06/22/12 13:43	jad
Sulfate	D516-02 - Turbidimetric	75	*	mg/L	5	30	07/02/12 16:14	tcd



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ Project ID: L95293

Antimony, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.02		.02008	mg/L	100.4	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0012	0.0012			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.01		.00998	mg/L	99.8	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.02	U	.01973	mg/L	98.7	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.02	U	.01977	mg/L	98.9	70	130	0.2	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.01	U	.01002	mg/L	100.2	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.01	U	.01003	mg/L	100.3	70	130	0.1	20	
Arsenic, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05464	mg/L	109.3	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0015	0.0015			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.0458	mg/L	91.5	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	U	.1058	mg/L	105.7	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	U	.1141	mg/L	114	70	130	7.55	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	.0086	.06246	mg/L	107.6	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	.0086	.06051	mg/L	103.7	70	130	3.17	20	
WG325300													
WG325300ICV	ICV	06/28/12 6:51	MS120604-5	.05		.05344	mg/L	106.9	90	110			
WG325300ICB	ICB	06/28/12 6:54				U	mg/L		-0.0015	0.0015			
WG325300LFB	LFB	06/28/12 6:57	MS120531-3	.05005		.04991	mg/L	99.7	85	115			
L95293-11AS	AS	06/28/12 7:13	MS120531-3	.05005	.0092	.06503	mg/L	111.5	70	130			
L95293-11ASD	ASD	06/28/12 7:16	MS120531-3	.05005	.0092	.065	mg/L	111.5	70	130	0.05	20	
Beryllium, disse	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.04926	mg/L	98.5	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.0501		.04452	mg/L	88.9	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1002	U	.10012	mg/L	99.9	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1002	U	.10606	mg/L	105.8	70	130	5.76	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.0501	U	.05168	mg/L	103.2	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.0501	U	.05044	mg/L	100.7	70	130	2.43	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05237	mg/L	104.7	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.0501		.04676	mg/L	93.3	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1002	.0095	.10216	mg/L	92.5	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1002	.0095	.10584	mg/L	96.1	70	130	3.54	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.0501	U	.05141	mg/L	102.6	70	130			
					-		3		-				

U .05098 mg/L

101.8

70

130 0.84

.0501

ASD 06/26/12 18:09 MS120531-3

L95293-11ASD

20

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

ACZ Project ID: L95293

Project ID:

ZS000001Z9

FMI Gold & Copper - Sierrita

Chromium, diss	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		1.963	mg/L	98.2	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.491	mg/L	98.2	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.503	mg/L	100.6	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.506	mg/L	101.2	85	115	0.59	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	U	.503	mg/L	100.6	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	U	.491	mg/L	98.2	85	115	2.41	20	
Cobalt, dissolve	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		2.02	mg/L	101	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.5	mg/L	100	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.503	mg/L	100.6	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.518	mg/L	103.6	85	115	2.94	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	U	.51	mg/L	102	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	U	.504	mg/L	100.8	85	115	1.18	20	
Copper, dissolv	/ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		1.996	mg/L	99.8	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.495	mg/L	99	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.509	mg/L	101.8	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.513	mg/L	102.6	85	115	0.78	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	U	.512	mg/L	102.4	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	U	.501	mg/L	100.2	85	115	2.17	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325317													
WG325317ICV	ICV	06/28/12 9:41	WC120618-	2.002		2	mg/L	99.9	95	105			
	ICB	06/28/12 9:47				U	mg/L		-0.3	0.3			
WG325317ICB				5.005		5.06	mg/L	101.1	90	110			
WG325317ICB WG325317LFB1	LFB	06/28/12 10:13	WC120601-	5.005		0.00	iiig/L						
	LFB AS	06/28/12 10:13 06/28/12 11:18	WC120601- WC120601-	5.005	1.9	6.74	mg/L	96.7	90	110			
WG325317LFB1					1.9 1.9		-			110	1.1	20	

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

ACZ Project ID: L95293

Project ID:

ZS000001Z9

FMI Gold & Copper - Sierrita

Analyzed 06/26/12 16:56 06/26/12 16:59 06/26/12 17:02 06/26/12 17:08	PCN/SCN MS120604-5 MS120531-3	QC .05	Sample	Found .05285	Units mg/L	Rec 105.7	Lower 90	Upper 110	RPD	Limit	Qual
06/26/12 16:59 06/26/12 17:02		.05			mg/L	105.7	90	110			
06/26/12 16:59 06/26/12 17:02		.05			mg/L	105.7	90	110			
06/26/12 16:59 06/26/12 17:02					5						
06/26/12 17:02	MS120531-3			U	mg/L		-0.0003	0.0003			
		.05005		.0463	mg/L	92.5	85	115			
	MS120531-3	.1001	.001	.09738	mg/L	96.3	70	130			
06/26/12 17:11	MS120531-3	.1001	.001	.10028	mg/L	99.2	70	130	2.93	20	
06/26/12 18:06	MS120531-3	.05005	.0009	.0533	mg/L	104.7	70	130			
06/26/12 18:09	MS120531-3	.05005	.0009	.05179	mg/L	101.7	70	130	2.87	20	
06/28/12 6:51	MS120604-5	.05		.05199	mg/L	104	90	110			
	MS120531-3	.05005			-	95.8					
			.0009		-						
06/28/12 7:16	MS120531-3	.05005	.0009	.05089		99.9	70	130	2.08	20	
1	M200 7 IC				0						
	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
00/00/40 40 07		100		100.00		100.0	05	405			
	11120430-3	100			-	100.9					
					-						
					-						
					-						
					mg/L				0.19	20	
06/26/12 20:50	II120606-2	50.007	9.5	61.48	mg/L	103.9	85				
06/26/12 20:54	II120606-2	50.007	9.5	61.66	mg/L	104.3	85	115	0.29	20	
)d	M200.7 IC	P									
Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
06/26/12 19:37	II120430-3	2		2.031	mg/L	101.6	95	105			
06/26/12 19:43				U	mg/L		-0.03	0.03			
06/26/12 19:55	II120606-2	.5		.518	mg/L	103.6	85	115			
06/26/12 20:07	II120606-2	.5	U	.522	mg/L	104.4	85	115			
06/26/12 20:10	II120606-2	.5	U	.519	mg/L	103.8	85	115	0.58	20	
	II120606-2		.1	.618		103.6	85	115			
06/26/12 20:54	II120606-2	.5	.1	.628	mg/L	105.6	85	115	1.61	20	
	M200.8 IC	P-MS									
Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
	MS120604-5	.05		.05117	mg/L	102.3	90	110			
06/26/12 16:56	1110120007-0				3						
06/26/12 16:56 06/26/12 16:59	WIG 12000 4 -0			U	ma/l		-0.0018	0.0018			
06/26/12 16:59		05005		U 04582	mg/L mg/l	91.5	-0.0018 85	0.0018 115			
06/26/12 16:59 06/26/12 17:02	MS120531-3	.05005	022	.04582	mg/L	91.5 85.3	85	115			
06/26/12 16:59 06/26/12 17:02 06/26/12 17:08	MS120531-3 MS120531-3	.1001	.022	.04582 .1074	mg/L mg/L	85.3	85 70	115 130	2 85	20	
06/26/12 16:59 06/26/12 17:02	MS120531-3		.022 .022 U	.04582	mg/L		85	115	2.85	20	
e))	06/28/12 6:51 06/28/12 6:57 06/28/12 6:57 06/28/12 7:13 06/28/12 7:16 d e Analyzed 06/26/12 19:37 06/26/12 19:37 06/26/12 19:37 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 19:33 06/26/12 19:34 06/26/12 19:37 06/26/12 19:37 06/26/12 19:37 06/26/12 19:37 06/26/12 19:37 06/26/12 19:55 06/26/12 19:55 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:07 06/26/12 20:50 06/26/12 20:50 06/26/12 20:50 06/26/12 20:5	06/28/12 6:51 MS120604-5 06/28/12 6:57 MS120531-3 06/28/12 7:13 MS120531-3 06/28/12 7:16 MS120531-3 06 M200.7 IC e Analyzed 06/26/12 19:37 II120606-2 06/26/12 20:07 II120606-2 06/26/12 20:50 II120606-2 06/26/12 20:50 II120606-2 06/26/12 19:37 II120430-3 06/26/12 19:37 II120430-3 06/26/12 19:37 II120430-3 06/26/12 19:37 II120606-2 06/26/12 19:35 II120606-2 06/26/12 19:55 II120606-2 06/26/12 19:55 II120606-2 06/26/12 20:07 II120606-2 06/26/12 20:07 II120606-2 06/26/12 20:07 II120606-2 06/26/12 20:05 II120606-2 06/26/12 20:05 <t< td=""><td>06/28/12 6:51 MS120604-5 .05 06/28/12 6:57 MS120531-3 .05005 06/28/12 7:13 MS120531-3 .05005 06/28/12 7:16 MS120531-3 .05005 06 M200.7 ICP PCN/SCN QC 06/26/12 19:37 II120606-2 50.007 06/26/12 20:07 II120606-2 50.007 06/26/12 20:50 II120606-2 50.007 06/26/12 20:50 II120606-2 50.007 06/26/12 20:51 II120606-2 50.007 06/26/12 20:55 II120606-2 50.007 06/26/12 19:37 II120430-3 2 06/26/12 19:37 II120430-3 2 06/26/12 19:55 II120606-2 .5 06/26/12 19:55 II120606-2 .5 06/26/12 20:07 II120606-2 .5 06/26/12 20:07 II120606-2 .5 06/26/12</td><td>06/28/12 6:51 MS120604-5 .05 06/28/12 6:57 MS120531-3 .05005 06/28/12 7:13 MS120531-3 .05005 .0009 06/28/12 7:16 MS120531-3 .05005 .0009 0 06/26/12 19:37 II120430-3 .05005 .0009 0 06/26/12 19:37 II120606-2 50.007 1 0 06/26/12 20:07 II120606-2 50.007 1 0 06/26/12 20:05 II120606-2 50.007 9.5 0 06/26/12 20:54 II120606-2 50.007 9.5 0 06/26/12 20:54 II120606-2 50.007 9.5 0 06/26/12 19:37 II120430-3 2 </td><td>06/28/12 6:51 MS120604-5 .05 .05199 06/28/12 6:54 U U 06/28/12 6:57 MS120531-3 .05005 .04793 06/28/12 7:13 MS120531-3 .05005 .0009 .05196 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 d M200.7 ICP V V V e Analyzed PCN/SCN QC Sample Found 06/26/12 19:37 II120430-3 100 100.88 U 06/26/12 19:55 II120606-2 50.007 51.46 06/26/12 20:07 153.51 06/26/12 20:07 II120606-2 50.007 1 53.51 06/26/12 20:50 1120606-2 50.007 9.5 61.48 06/26/12 20:50 II120606-2 50.007 9.5 61.48 U 06/26/12 19:55 II120606-2 50.007 9.5 61.66 ed M2102 / TCP U U 06/26/12 19:55 U 522 51.8 U</td><td>06/28/12 6:51 MS120604-5 .05 .05199 mg/L 06/28/12 6:57 MS120531-3 .05005 .04793 mg/L 06/28/12 6:57 MS120531-3 .05005 .0009 .05196 mg/L 06/28/12 7:13 MS120531-3 .05005 .0009 .05196 mg/L 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 mg/L 06/26/12 19:37 II120430-3 .05005 .0009 .05089 mg/L 06/26/12 19:37 II120606-2 50.007 51.46 mg/L 06/26/12 06/26/12 19:55 II120606-2 50.007 1 53.51 mg/L 06/26/12 20:50 II120606-2 50.007 1 53.51 mg/L 06/26/12 20:50 II120606-2 50.007 9.5 61.66 mg/L 06/26/12 20:50 II120606-2 50.007 9.5 61.66 mg/L 06/26/12 20:50 II120606-2 50.007 9.5 61.66 mg/L 06/26/12 20:50 <t< td=""><td>$\begin{array}{c c c c c c c c c c c c c c c c c c c$</td><td>06/28/12.6:51 MS120604-5 .05 .05199 mg/L 104 90 06/28/12.6:57 MS120531-3 .05005 .04793 mg/L 102 70 06/28/12.6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/26/12.19:37 II120430-3 100 100.88 mg/L 100.9 95 06/26/12.19:55 II120606-2 50.007 51.46 mg/L 102.9 85 06/26/12.20:07 II120606-2 50.007 1 53.51 mg/L 103.8 85 06/26/12.20:54 II120606-2 50.007 9.5 61.46 mg/L 101.3 85 <t< td=""><td>o6/28/12 6:51 MS120604-5 .05 .05199 mg/L 104 90 110 06/28/12 6:57 MS120531-3 .05005 .04793 mg/L 102 70 130 06/28/12 6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 130 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 mg/L 99.9 70 130 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 mg/L 99.9 70 130 06/26/12 19:37 II120430-3 100 100.88 mg/L 100.9 95 105 06/26/12 19:37 II120606-2 50.007 51.46 mg/L 102.9 85 115 06/26/12 20:07 II120606-2 50.007 1 53.51 mg/L 104.8 85 115 06/26/12 20:50 II120606-2 50.007 9.5 61.48 mg/L 103.9 85 115 06/26/12 19:55</td><td>06/28/12 6:51 MS120604-5 .05 .05199 mg/L 104 90 110 06/28/12 6:57 MS120531-3 .05005 .04793 mg/L 95.8 85 115 06/28/12 6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 130 06/28/12 7:13 MS120531-3 .05005 .0009 .05089 mg/L 102 70 130 2.08 d M200.7 ICP .06/28/12 19:37 II120430-3 100 100.88 mg/L 100.9 95 105 06/26/12 19:37 II120430-3 100 100.88 mg/L 102.9 85 115 06/26/12 19:43 II120606-2 50.007 1 53.61 mg/L 104.8 85 115 06/26/12 20:50 II120606-2 50.007 1 53.61 mg/L 104.3 85 115 0.19 06/26/12 20:50 II120606-2 50.007</td><td>66/28/12 6.5 .05199 mg/L 104 90 110 06/28/12 6.54 U mg/L -0.0003 0.0003 0.0003 06/28/12 6.57 MS120531-3 .05005 .0019 .05186 mg/L 102 70 130 0.003 0.0003 06/28/12 7.13 MS120531-3 .05005 .0009 .05186 mg/L 102 70 130 2.08 20 d M200.7 ICP V V mg/L 100.9 95 105 V V Init 06/28/12 19:37 II120430-3 100 100.88 mg/L 100.9 95 105 V V V mg/L -0.6 0.6</td></t<></td></t<></td></t<>	06/28/12 6:51 MS120604-5 .05 06/28/12 6:57 MS120531-3 .05005 06/28/12 7:13 MS120531-3 .05005 06/28/12 7:16 MS120531-3 .05005 06 M200.7 ICP PCN/SCN QC 06/26/12 19:37 II120606-2 50.007 06/26/12 20:07 II120606-2 50.007 06/26/12 20:50 II120606-2 50.007 06/26/12 20:50 II120606-2 50.007 06/26/12 20:51 II120606-2 50.007 06/26/12 20:55 II120606-2 50.007 06/26/12 19:37 II120430-3 2 06/26/12 19:37 II120430-3 2 06/26/12 19:55 II120606-2 .5 06/26/12 19:55 II120606-2 .5 06/26/12 20:07 II120606-2 .5 06/26/12 20:07 II120606-2 .5 06/26/12	06/28/12 6:51 MS120604-5 .05 06/28/12 6:57 MS120531-3 .05005 06/28/12 7:13 MS120531-3 .05005 .0009 06/28/12 7:16 MS120531-3 .05005 .0009 0 06/26/12 19:37 II120430-3 .05005 .0009 0 06/26/12 19:37 II120606-2 50.007 1 0 06/26/12 20:07 II120606-2 50.007 1 0 06/26/12 20:05 II120606-2 50.007 9.5 0 06/26/12 20:54 II120606-2 50.007 9.5 0 06/26/12 20:54 II120606-2 50.007 9.5 0 06/26/12 19:37 II120430-3 2	06/28/12 6:51 MS120604-5 .05 .05199 06/28/12 6:54 U U 06/28/12 6:57 MS120531-3 .05005 .04793 06/28/12 7:13 MS120531-3 .05005 .0009 .05196 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 d M200.7 ICP V V V e Analyzed PCN/SCN QC Sample Found 06/26/12 19:37 II120430-3 100 100.88 U 06/26/12 19:55 II120606-2 50.007 51.46 06/26/12 20:07 153.51 06/26/12 20:07 II120606-2 50.007 1 53.51 06/26/12 20:50 1120606-2 50.007 9.5 61.48 06/26/12 20:50 II120606-2 50.007 9.5 61.48 U 06/26/12 19:55 II120606-2 50.007 9.5 61.66 ed M2102 / TCP U U 06/26/12 19:55 U 522 51.8 U	06/28/12 6:51 MS120604-5 .05 .05199 mg/L 06/28/12 6:57 MS120531-3 .05005 .04793 mg/L 06/28/12 6:57 MS120531-3 .05005 .0009 .05196 mg/L 06/28/12 7:13 MS120531-3 .05005 .0009 .05196 mg/L 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 mg/L 06/26/12 19:37 II120430-3 .05005 .0009 .05089 mg/L 06/26/12 19:37 II120606-2 50.007 51.46 mg/L 06/26/12 06/26/12 19:55 II120606-2 50.007 1 53.51 mg/L 06/26/12 20:50 II120606-2 50.007 1 53.51 mg/L 06/26/12 20:50 II120606-2 50.007 9.5 61.66 mg/L 06/26/12 20:50 II120606-2 50.007 9.5 61.66 mg/L 06/26/12 20:50 II120606-2 50.007 9.5 61.66 mg/L 06/26/12 20:50 <t< td=""><td>$\begin{array}{c c c c c c c c c c c c c c c c c c c$</td><td>06/28/12.6:51 MS120604-5 .05 .05199 mg/L 104 90 06/28/12.6:57 MS120531-3 .05005 .04793 mg/L 102 70 06/28/12.6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/26/12.19:37 II120430-3 100 100.88 mg/L 100.9 95 06/26/12.19:55 II120606-2 50.007 51.46 mg/L 102.9 85 06/26/12.20:07 II120606-2 50.007 1 53.51 mg/L 103.8 85 06/26/12.20:54 II120606-2 50.007 9.5 61.46 mg/L 101.3 85 <t< td=""><td>o6/28/12 6:51 MS120604-5 .05 .05199 mg/L 104 90 110 06/28/12 6:57 MS120531-3 .05005 .04793 mg/L 102 70 130 06/28/12 6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 130 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 mg/L 99.9 70 130 06/28/12 7:16 MS120531-3 .05005 .0009 .05089 mg/L 99.9 70 130 06/26/12 19:37 II120430-3 100 100.88 mg/L 100.9 95 105 06/26/12 19:37 II120606-2 50.007 51.46 mg/L 102.9 85 115 06/26/12 20:07 II120606-2 50.007 1 53.51 mg/L 104.8 85 115 06/26/12 20:50 II120606-2 50.007 9.5 61.48 mg/L 103.9 85 115 06/26/12 19:55</td><td>06/28/12 6:51 MS120604-5 .05 .05199 mg/L 104 90 110 06/28/12 6:57 MS120531-3 .05005 .04793 mg/L 95.8 85 115 06/28/12 6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 130 06/28/12 7:13 MS120531-3 .05005 .0009 .05089 mg/L 102 70 130 2.08 d M200.7 ICP .06/28/12 19:37 II120430-3 100 100.88 mg/L 100.9 95 105 06/26/12 19:37 II120430-3 100 100.88 mg/L 102.9 85 115 06/26/12 19:43 II120606-2 50.007 1 53.61 mg/L 104.8 85 115 06/26/12 20:50 II120606-2 50.007 1 53.61 mg/L 104.3 85 115 0.19 06/26/12 20:50 II120606-2 50.007</td><td>66/28/12 6.5 .05199 mg/L 104 90 110 06/28/12 6.54 U mg/L -0.0003 0.0003 0.0003 06/28/12 6.57 MS120531-3 .05005 .0019 .05186 mg/L 102 70 130 0.003 0.0003 06/28/12 7.13 MS120531-3 .05005 .0009 .05186 mg/L 102 70 130 2.08 20 d M200.7 ICP V V mg/L 100.9 95 105 V V Init 06/28/12 19:37 II120430-3 100 100.88 mg/L 100.9 95 105 V V V mg/L -0.6 0.6</td></t<></td></t<>	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	06/28/12.6:51 MS120604-5 .05 .05199 mg/L 104 90 06/28/12.6:57 MS120531-3 .05005 .04793 mg/L 102 70 06/28/12.6:57 MS120531-3 .05005 .0009 .05196 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/28/12.7:16 MS120531-3 .05005 .0009 .05089 mg/L 102 70 06/26/12.19:37 II120430-3 100 100.88 mg/L 100.9 95 06/26/12.19:55 II120606-2 50.007 51.46 mg/L 102.9 85 06/26/12.20:07 II120606-2 50.007 1 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ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Nitrate/Nitrite as	N N		M353.2 - H	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325668													
WG325668ICV	ICV	07/04/12 0:14	WI120405-3	2.416		2.365	mg/L	97.9	90	110			
WG325668ICB	ICB	07/04/12 0:15				U	mg/L		-0.06	0.06			
WG325668LFB1	LFB	07/04/12 0:19	WI120211-3	2		2.02	mg/L	101	90	110			
L95291-01AS	AS	07/04/12 0:37	WI120211-3	2	.3	2.302	mg/L	100.1	90	110			
L95291-02DUP	DUP	07/04/12 1:18			.23	.227	mg/L				1.3	20	
WG325668LFB2	LFB	07/04/12 1:20	WI120211-3	2		1.976	mg/L	98.8	90	110			
Residue, Filtera	ble (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325022													
WG325022PBW	PBW	06/22/12 13:15				U	mg/L		-20	20			
WG325022LCSW	LCSW	06/22/12 13:16	PCN39028	260		236	mg/L	90.8	80	120			
L95293-11DUP	DUP	06/22/12 13:44			330	322	mg/L				2.5	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05415	mg/L	108.3	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.04593	mg/L	91.8	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	.0005	.10748	mg/L	106.9	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	.0005	.11512	mg/L	114.5	70	130	6.86	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	.0009	.05644	mg/L	111	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	.0009	.05476	mg/L	107.6	70	130	3.02	20	
WG325300													
WG325300ICV	ICV	06/28/12 6:51	MS120604-5	.05		.0536	mg/L	107.2	90	110			
WG325300ICB	ICB	06/28/12 6:54				U	mg/L		-0.0003	0.0003			
WG325300LFB	LFB	06/28/12 6:57	MS120531-3	.05005		.04875	mg/L	97.4	85	115			
L95293-11AS	AS	06/28/12 7:13	MS120531-3	.05005	.0008	.05555	mg/L	109.4	70	130			
L95293-11ASD	ASD	06/28/12 7:16	MS120531-3	.05005	.0008	.05437	mg/L	107	70	130	2.15	20	

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325567													
WG325567ICB	ICB	07/02/12 13:05				U	mg/L		-3	3			
WG325567ICV	ICV	07/02/12 13:05	WI120625-2	20		18.8	mg/L	94	90	110			
WG325567LFB	LFB	07/02/12 16:03	WI120508-1	10		10.1	mg/L	101	90	110			
L95250-01DUP	DUP	07/02/12 16:11			1860	1870	mg/L				0.5	20	
L95250-02AS	AS	07/02/12 16:13	SO4TURB5	100	1660	1779	mg/L	119	90	110			M3
L95293-08DUP	DUP	07/02/12 16:31			1900	1920	mg/L				1	20	
L95293-09AS	AS	07/02/12 16:31	SO4TURB10	10	1700	1680	mg/L	-200	90	110			M3
Sulfate			M300.0 - I	on Chrom	natography								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324762													
WG324762ICV	ICV	06/20/12 17:56	WI120406-1	50.15		51.1	mg/L	101.9	90	110			
WG324762ICB	ICB	06/20/12 18:18				U	mg/L		-1.5	1.5			
WG325315													
WG325315LFB	LFB	06/28/12 20:17	WI120312-2	30		29.88	mg/L	99.6	90	110			
L95155-02AS	AS	06/28/12 21:41	WI120312-2	30	23.16	52.22	mg/L	96.9	90	110			
L95293-02DUP	DUP	06/29/12 1:55			64.9	64.92	mg/L				0	20	
L95293-03AS	AS	06/29/12 2:37	WI120312-2	30	27.75	56.4	mg/L	95.5	90	110			
L95155-01DUP	DUP	06/29/12 12:53			30.73	30.38	mg/L				1.1	20	
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05474	mg/L	109.5	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.0477	mg/L	95.3	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	U	.10048	mg/L	100.4	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	U	.10416	mg/L	104.1	70	130	3.6	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	U	.05387	mg/L	107.6	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	U	.05306	mg/L	106	70	130	1.52	20	



(800) 334-5493

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95293-06	WG325567	Sulfate	D516-02 - Turbidimetric	М3	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.
L95293-07	WG325567	Sulfate	D516-02 - Turbidimetric	М3	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.
L95293-08	WG325567	Sulfate	D516-02 - Turbidimetric	М3	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.
L95293-09	WG325132	Lead, dissolved	M200.8 ICP-MS	BE	Target analyte in continuing calibration blank (CCB) at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
	WG325567	Sulfate	D516-02 - Turbidimetric	М3	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.
L95293-11	WG325567	Sulfate	D516-02 - Turbidimetric	М3	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.



ACZ Project ID: L95293

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
2772 Downhill Drive	Steamboot Springs CO 90497 (900) 224 5402

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

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L95293
ZS00001Z9	Date Rece		6/22/201	
	Receive Date Pri		6/	gac 25/2012
Receipt Verification	Dutern	intea.	U.	20/2012
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?				Х
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time	analyses?	Х		
6) Is the Chain of Custody complete and accurate?			Х	
The 'sampled by' field on the Chain of Custody was not completed.	2			
7) Were any changes made to the Chain of Custody prior to ACZ receiving the sa	mples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and T	ïme?	Х		
11) For preserved bottle types, was the pH checked and within limits?		Х		
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
Chain of Custody Related Remarks				
Client Contact Remarks				
Shipping Containers				

italiioio			
Cooler Id	Temp (°C)	Rad ($\mu R/Hr$)	Custody Seal Intact?
NA15631	1.8	14	Yes

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

Name: Jon Anderson Company: Freeport-Mc E-mail: jonathan anders				(2)	0 W T	Duval M	line De	ad	n	
	MaBan Signita Ing		Addre							
		-	Telep			<u>ley, AZ</u> 3-2714	03014			
Copy of Report to:									<u>`</u>	
Name: Ben Daigneau			E-mai	⊩ bdaio	meaulo	clearcr	eekassi	ociates	com	
Company: Clear Creek	Associates	-	<u> </u>			2-3222	oonassi	bolutob		
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nvoice to:										1
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Company:			-							
E-mail:	A hard at a state of the state		Telep		-+-					
	t holding time (HT), or if insuffic n, shall ACZ proceed with reque				ete				YES NO	
f "NO" then ACZ will con	tact client for further instruction	n. If neithe	r "YES"	nor "N					···• L	4
	ceed with the requested analyse	es, even if	HT is ex	pired, a	and data	a will be	qualifie			
Are samples for CO DW (<u> </u>
f yes, please include stat PROJECT INFORMATI	te forms. Results will be reporte	a to PQL.		ANALA	(SES RI	FOLIEST	FD <i>Latte</i>	ach list	NO or use i	× quote nur
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Project/PO #: ZS00000		_	Containers	SO4 by EPA 300 or EPA 375	Quarterly					
Reporting state for com	pliance testing:	_	onta	300	te					
Sampler's Name:			σč	EPA	ar					
	icensable material? Yes No		#	24 by	5u				1	
SAMPLE IDENTIFICA		Matrix								
CW-3	06/18/12 : 1325	GW	1	×						
NP-2	06/18/12 : 1458	GW	$\frac{1}{1}$	×			<u> </u>	-+	_+	
ESP-2	06/19/12 : 1107	GW	$\left \begin{array}{c} 1 \\ \cdot \end{array} \right $	×			<u> </u>	-+	-+	<u> </u>
ESP-1	06/19/12 : 1204	GW	<u> </u>	×			<u> </u>		_+	<u> </u> +
ESP-3	06/19/12 : 1253	GW	<u> </u>	×			+	+	_+	
IW-20	06/20/12:0815	GW	3	<u> </u>	×		<u> </u>	—	+	<u>+</u>
IW-21	06/20/12:0839	GW	3	 	×				_+	_ .
IW-13	06/20/12:0853	GW	3	ļ	×		<u> </u>			
IW-3A	06/20/12:0910	GW	3	ļ	×					
	06/20/12:1220	GW	1 1	×						

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White - Return with sample. Yellow - Retain for your records.

2773 Downhill Drive Steamboat	pratories, Inc.	4-5493					CH	AIN (of CUS	STODY
Report to:	Springs, CO 80487 (000) 55									
Name: Jon Anderson		·	Addres	ss: 620	0 W. D	uval Mir	ne Rd			
Company: Freeport McMoR	an Copper & Gold Sierrit			_		ey AZ 8				<u></u>
-mail: jonathan_anderson@		-	Telept		20-393					
Copy of Report to:			E . 1		_					
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nvoice to:		L.,			_				i .	
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f sample(s) received past hold					ete			YE N		
analysis before expiration, sha f "NO" then ACZ will contact o	lient for further instruction.	. If neither	r "YES"	nor "N	0"				·	
s indicated, ACZ will proceed	with the requested analyses	s, even if l	HT is ex	pired, a	nd data	will be q	ualified			
Are samples for CO DW Compl								YE		
f yes, please include state forr	ns. Results will be reported	i to PQL				OUESTE		NN	use quote	numher)
PROJECT INFORMATION			1				ם ומוומי			
Quote #:		-	<u>ہ</u>							
Project/PO #: ZS000001Z9		_	of Containers	Quarterly						
Reporting state for compliance	e testing:	_	onta	te						
Sampler's Name:		_	μğ	ar						
Are any samples NRC licens			_ 7#	5u						
SAMPLE IDENTIFICATION		Matrix		<u> </u>						<u> </u>
RT-1	6/19/12 : 0849	GW	3	×						<u> </u>
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Matrix SW (Surface Water)	GW (Ground Water) · WW (Waste	→ Water) · D	W (Drink	ing Water	r) · SL (Sl	udge) · SO	(Soil) · C	DL (Oil) · C	ther (Specify	/) /)

FRMAD050.01.15.09

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Analytical Report

July 03, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L95294

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 22, 2012. This project has been assigned to ACZ's project number, L95294. 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 L95294. 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 August 03, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	SIWELL

ACZ Sample ID: **L95294-01** Date Sampled: 06/20/12 13:17 Date Received: 06/22/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	8.46		mg/L	0.5	2.5	06/29/12 4:44	сср

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	MO-2007-5C

ACZ Sample ID: L95294-02 Date Sampled: 06/18/12 18:38 Date Received: 06/22/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	238.89		mg/L	2.5	12.5	06/29/12 17:28	в сср



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refe	erences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate	M300.0 - Ion Chromatography												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324762													
WG324762ICV	ICV	06/20/12 17:56	WI120406-1	50.15		51.1	mg/L	101.9	90	110			
WG324762ICB	ICB	06/20/12 18:18				U	mg/L		-1.5	1.5			
WG325315													
WG325315LFB	LFB	06/28/12 20:17	WI120312-2	30		29.88	mg/L	99.6	90	110			
L95293-02DUP	DUP	06/29/12 1:55			64.9	64.92	mg/L				0	20	
L95293-03AS	AS	06/29/12 2:37	WI120312-2	30	27.75	56.4	mg/L	95.5	90	110			



(800) 334-5493

ACZ Project ID: L95294

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L95294

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
2772 Downhill Drive	Steamboot Springs CO 90497 (900) 224 5402

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

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L95294
ZS000001Z9	Date Rece		6/22/201	
	Receive Date Pri		6/	gac 25/2012
Receipt Verification	Date Fi	initeu.	074	25/2012
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?				Х
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time	analyses?	Х		
6) Is the Chain of Custody complete and accurate?			Х	
The 'sampled by' field on the Chain of Custody was not completed.	2			
7) Were any changes made to the Chain of Custody prior to ACZ receiving the sa	imples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and T	Time?	Х		
11) For preserved bottle types, was the pH checked and within limits?				Х
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
Chain of Custody Related Remarks				
Client Contact Remarks				
Shipping Containers				

italiioio			
Cooler Id	Temp (°C)	Rad ($\mu R/Hr$)	Custody Seal Intact?
NA15631	1.8	14	Yes

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

Name: Jon Anderson Address: 6200 W. Duval Mine Road Company: Freeport-McMoRan Sierrita Inc. Green Valley, AZ 85614 E-mail: jonathan_anderson@fmi.com Telephone: 520-393-2714 Copy of Report to: E-mail: bdaigneau(@clearcreckassociates.com Name: Ben Daigneau E-mail: bdaigneau(@clearcreckassociates.com Company: E-mail: bdaigneau(@clearcreckassociates.com Invoice to: Address: Name: Address: Company: E-mail: bdaigneau(@clearcreckassociates.com Invoice to: Address: Name: Address: Company: E-mail: bdaigneau(@clearcreckassociates.com If sample(s) raceived past holding time (HT), or if insufficient HT remains to complete YES If NO' then ACZ will context client of rufment restruction. If neither 'YES' nor 'NO' ND is indicated, ACZ will proceed with requested short HT analyses? YES If yes, please include state forms. Results will be reported to POL. ND Project/PO #: ZS00000179 YES ND Reporting state for compliance testing: State for compliance testing: State for compliance testing: Sample's Name: Address: SW Address: Address				r						
E-mail: jonathan_anderson@fmi.com Telephone: 520-393-2714 Copy of Report to: E-mail: bdaigneau@clearcreckassociates.com Name: Ben Daigneau E-mail: bdaigneau@clearcreckassociates.com Company: Clear Creek Associates E-mail: bdaigneau@clearcreckassociates.com Invoice to: Address: Name: Address: Company: E-mail: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? NO If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. NO PROJECT INFORMATION ANALYSES REQUESTED (attach list or use of the project/PO #: ZS000001Z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No # # # # # # # # # # # # # # # # # # #			-	Addre						
Copy of Report to: Name: Ben Daigneau Company: Clear Creek Associates Invoice to: Name: Company: E-mail: 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? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION Auote #: Project/PO #: ZS000001Z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE-TIME Matrix Si WELL 06/20/12 : 1317 GW 1 X			-	<u> </u>				514		
Name: Ben Daigneau Company: Clear Creek Associates E-mail: bdaigneau@clearcreekassociates.com Invoice to: Telephone: 520-622-3222 Name: Address: Company: Address: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? NO If NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. NO Are samples for CO DW Compliance Monitoring? YES NO PROJECT INFORMATION ANALYSES REQUESTED (attach list or use of Quote #: NO Project/PO #: ZS000001Z9 Sampler's Name: Si Sampler's Name: Si Sampler's Name: Are any samples NRC licensable material? Yes No Si Sampler's Mame: Si Sampler's I317 GW I X I I X I I X I I I I I I I I X I I I I I I I I I I <t< td=""><td></td><td>Dn@Imi.com</td><td></td><td>Telep</td><td>hone:</td><td>520-393-2</td><td>714</td><td></td><td></td><td></td></t<>		Dn@Imi.com		Telep	hone:	520-393-2	714			
Company: Clear Creek Associates Telephone: 520-622-3222 Invoice to: Address: Name: Address: Company: E-mail: 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? NO If NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. NO Are samples for CO DW Compliance Monitoring? YES NO PROJECT INFORMATION ANALYSES REQUESTED (attach list or use of the expired normalized for compliance testing: Sampler's Name: Sampler's Name: Sampler's Name: Are any samples NRC licensable material? Yes No Matrix Si Sample: 10ENTIFICATION DATE:TIME SIWELL 06/20/12 : 1317 GW 1 X Image: State for compliance for the expired for th	Copy of Report to:									
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Company: Telephone: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? NO If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. YES Are samples for CO DW Compliance Monitoring? YES If yes, please include state forms. Results will be reported to PQL. NO PROJECT INFORMATION ANALYSES REQUESTED (attach list or use of the project/PO #: ZS000001Z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix SitWELL 06/20/12 : 1317 GW 1 X	Invoice to:									
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FRMAD050.01.15.09



Analytical Report

July 11, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L95422

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 29, 2012. This project has been assigned to ACZ's project number, L95422. 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 L95422. 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 August 11, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







FMI Gold & Copper - Sierrita

Project ID:	ZS000001Z9
Sample ID:	M-10

ACZ Sample ID: L95422-01 Date Sampled: 06/25/12 13:34 Date Received: 06/29/12 Sample Matrix: Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual X	Q Uni	ts MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/	0.0004	0.002	07/10/12 5:44	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0061		mg/	0.0001	0.0005	07/10/12 5:44	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/	0.0001	0.0005	07/10/12 5:44	pmc
Cadmium, dissolved	M200.8 ICP-MS	0.0001	В	mg/	0.0001	0.0005	07/10/12 5:44	pmc
Chromium, dissolved	M200.7 ICP		U	mg/	0.01	0.05	07/06/12 13:18	aeb
Cobalt, dissolved	M200.7 ICP		U	mg/	0.01	0.05	07/06/12 13:18	aeb
Copper, dissolved	M200.7 ICP		U	mg/	0.01	0.05	07/06/12 13:18	aeb
Lead, dissolved	M200.8 ICP-MS	0.0010		mg/	0.0001	0.0005	07/10/12 5:44	ртс
Magnesium, dissolved	M200.7 ICP	12.7		mg/	_ 0.2	1	07/06/12 13:18	aeb
Molybdenum, dissolved	d M200.7 ICP		U	mg/	0.01	0.05	07/06/12 13:18	aeb
Nickel, dissolved	M200.8 ICP-MS		U	mg/	0.0006	0.003	07/10/12 5:44	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0011		mg/	0.0001	0.0003	07/10/12 5:44	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/	0.0001	0.0005	07/10/12 5:44	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual X	Q Uni	ts MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6	ł	* mg/	0.1	0.5	07/03/12 16:32	mla
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.77	ł	* mg/	0.02	0.1	07/11/12 0:08	pjb
Residue, Filterable (TDS) @180C	SM2540C	440		mg/	10	20	06/29/12 15:37	jad
Sulfate	D516-02 - Turbidimetric	162	÷	* mg/	_ 5	30	07/09/12 22:15	tcd

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	CCGV

ACZ Sample ID: **L95422-02** Date Sampled: 06/26/12 07:51 Date Received: 06/29/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	88.69		mg/L	0.5	2.5	07/06/12 15:52	сср

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000001Z9
Sample ID:	M-20

ACZ Sample ID: L95422-03 Date Sampled: 06/26/12 11:42 Date Received: 06/29/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1722.9		mg/L	25	125	07/05/12 22:38	в сср



Project ID:	ZS000001Z9
Sample ID:	M-9

Inorganic Analytical Results

ACZ Sample ID:	L95422-04
Date Sampled:	06/27/12 14:28
Date Received:	06/29/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	07/10/12 5:47	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0054		mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	07/06/12 13:27	aeb
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	07/06/12 13:27	aeb
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	07/06/12 13:27	aeb
Lead, dissolved	M200.8 ICP-MS	0.0008		mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Magnesium, dissolved	M200.7 ICP	12.1		mg/L	0.2	1	07/06/12 13:27	aeb
Molybdenum, dissolve	d M200.7 ICP	0.01	В	mg/L	0.01	0.05	07/06/12 13:27	aeb
Nickel, dissolved	M200.8 ICP-MS		U	mg/L	0.0006	0.003	07/10/12 5:47	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0022		mg/L	0.0001	0.0003	07/10/12 5:47	pmc
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B *	mg/L	0.1	0.5	07/03/12 16:42	mla
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.69	*	mg/L	0.02	0.1	07/11/12 0:12	pjb
Residue, Filterable (TDS) @180C	SM2540C	320		mg/L	10	20	06/29/12 15:38	jad
Sulfate	D516-02 - Turbidimetric	81	*	mg/L	5	30	07/09/12 22:15	tcd



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Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

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M200.8 ICP-MS

Inorganic QC Summary

ACZ Project ID: L95422

Project ID:

Antimony, dissolved

ZS000001Z9

FMI Gold & Copper - Sierrita

Anumony, uiss	olveu		WZ00.0 10	1 -100									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.02		.02098	mg/L	104.9	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0012	0.0012			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.01		.01052	mg/L	105.2	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.01	U	.00992	mg/L	99.2	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.01	U	.01005	mg/L	100.5	70	130	1.3	20	
Arsenic, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05515	mg/L	110.3	90	110			
WG325904ICB	ICB	07/10/12 4:24				.00016	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.05075	mg/L	101.4	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05556	mg/L	111	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05614	mg/L	112.2	70	130	1.04	20	
Beryllium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.04768	mg/L	95.4	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.0501		.04778	mg/L	95.4	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.0501	U	.05408	mg/L	107.9	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.0501	U	.05333	mg/L	106.4	70	130	1.4	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05399	mg/L	108	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.0501		.05107	mg/L	101.9	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.0501	U	.05464	mg/L	109.1	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.0501	U	.05475	mg/L	109.3	70	130	0.2	20	
Chromium, dise	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717								. .	95	105			
	ICV	07/06/12 12:50	II120430-3	2		1.951	mg/L	97.6	90	105			
WG325717 WG325717ICV WG325717ICB	ICV ICB	07/06/12 12:50 07/06/12 12:56	II120430-3	2		1.951 U	mg/L mg/L	97.6	-0.03	0.03			
WG325717ICV			II120430-3 II120606-2	2 .5			-	97.6					
WG325717ICV WG325717ICB	ICB	07/06/12 12:56			U	U	mg/L		-0.03	0.03			

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Inorganic QC Summary

ACZ Project ID: L95422

Project ID:

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FMI Gold & Copper - Sierrita

Cobalt, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		2.005	mg/L	100.3	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.521	mg/L	104.2	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.524	mg/L	104.8	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.518	mg/L	103.6	85	115	1.15	20	
Copper, dissolv	ed		M200.7 IC	;P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		1.992	mg/L	99.6	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.531	mg/L	106.2	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.541	mg/L	108.2	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.534	mg/L	106.8	85	115	1.3	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325595													
WG325595ICV	ICV	07/03/12 9:56	WC120628-	2.002		1.94	mg/L	96.9	95	105			
WG325595ICB	ICB	07/03/12 10:03				U	mg/L		-0.3	0.3			
WG325639													
WG325639ICV	ICV	07/03/12 15:03	WC120628-	2.002		1.9	mg/L	94.9	95	105			
WG325639ICB	ICB	07/03/12 15:09				U	mg/L		-0.3	0.3			
WG325639LFB1	LFB	07/03/12 15:16	WC120601-	5.005		4.91	mg/L	98.1	90	110			
L95422-01AS	AS	07/03/12 16:35	WC120601-	5.005	.6	5.68	mg/L	101.5	90	110			
L95422-01DUP	DUP	07/03/12 16:38			.6	.64	mg/L				6.5	20	R
WG325639LFB2	LFB	07/03/12 17:39	WC120601-	5.005		5.05	mg/L	100.9	90	110			
Lead, dissolved			M200.8 IC	P-MS			0						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05304	mg/L	106.1	90	110			
WG325904ICV WG325904ICB	ICB	07/10/12 4:21	10120020-1	.00		.05304 U	mg/L	100.1	-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:24	MS120702-3	.05005		.05055	mg/L	101	-0.0003 85	115			
L95418-01AS	AS	07/10/12 4:27	MS120702-3 MS120702-3	.05005	U	.05055	mg/L	103.7	85 70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05188	mg/L	103.7	70	130	0	20	
Magnesium, dis	solved		M200.7 IC	P			-						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	100		100.93	mg/L	100.9	95	105			
WG325717ICB	ICB	07/06/12 12:56	1120-00-0	100		U	mg/L	100.3	-0.6	0.6			
WG325717LFB	LFB	07/06/12 12:50	II120606-2	50.007		54.43	mg/L	108.8	-0.0 85	0.0 115			
L95422-01AS	AS	07/06/12 13:08	II120606-2 II120606-2	50.007	12.7	54.45 67.54	mg/L	108.8	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	50.007	12.7	66.8	-	109.7	85 85	115	1.1	20	
L00422-01A0D	ASD	01/00/12 13.24	1120000-2	50.007	12.1	00.0	mg/L	100.2	00	110	1.1	20	

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

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Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		2.022	mg/L	101.1	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.55	mg/L	110	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.565	mg/L	113	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.545	mg/L	109	85	115	3.6	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05274	mg/L	105.5	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0018	0.0018			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.04984	mg/L	99.6	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.04873	mg/L	97.4	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.04893	mg/L	97.8	70	130	0.41	20	
Nitrate/Nitrite as	Ν		M353.2 - I	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325992													
WG325992ICV	ICV	07/10/12 21:33	WI120706-1	2.416		2.335	mg/L	96.6	90	110			
WG325992ICB	ICB	07/10/12 21:34				U	mg/L		-0.06	0.06			
WG326001													
WG326001LFB1	LFB	07/10/12 23:43	WI120211-3	2		1.988	mg/L	99.4	90	110			
L95417-08AS	AS	07/11/12 0:02	WI120211-3	2	U	1.984	mg/L	99.2	90	110			
L95417-09DUP	DUP	07/11/12 0:05			U	U	mg/L				0	20	RA
WG326001LFB2	LFB	07/11/12 0:18	WI120211-3	2		2.069	mg/L	103.5	90	110			
Residue, Filteral	ole (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325441													
WG325441PBW	PBW	06/29/12 15:15				U	mg/L		-20	20			
WG325441LCSW	LCSW	06/29/12 15:16	PCN39028	260		250	mg/L	96.2	80	120			
L95431-17DUP	DUP	06/29/12 15:44			470	470	mg/L				0	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05255	mg/L	105.1	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.04821	mg/L	96.3	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05714	mg/L	114.2	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05609	mg/L	112.1	70	130	1.85	20	

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Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			D516-02 -	Turbidim	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325906													
WG325906ICB	ICB	07/09/12 18:10				U	mg/L		-3	3			
WG325906ICV	ICV	07/09/12 18:10	WI120625-2	20		20	mg/L	100	90	110			
WG325906LFB	LFB	07/09/12 22:12	WI120508-1	10		9	mg/L	90	90	110			
L95419-05AS	AS	07/09/12 22:24	SO4TURB50	10	910	937	mg/L	270	90	110			M3
L95419-04DUP	DUP	07/09/12 22:26			180	181	mg/L				0.6	20	
Sulfate			M300.0 - I	on Chrom	atography	1							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325507													
WG325507ICV	ICV	07/02/12 14:03	WI120406-1	50.15		51.22	mg/L	102.1	90	110			
WG325507ICB	ICB	07/02/12 14:24				U	mg/L		-1.5	1.5			
WG325674													
WG325674LFB	LFB	07/05/12 13:29	WI120312-2	30		29.89	mg/L	99.6	90	110			
L95421-04DUP	DUP	07/05/12 19:07			1537.8	1537.6	mg/L				0	20	
L95421-05AS	AS	07/06/12 14:07	WI120312-2	30000	27250	57420	mg/L	100.6	90	110			
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05356	mg/L	107.1	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.05043	mg/L	100.8	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05253	mg/L	105	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05245	mg/L	104.8	70	130	0.15	20	



(800) 334-5493

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95422-01	WG325639	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG326001	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325906	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L95422-04	WG325639	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG326001	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325906	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.



ACZ Project ID: L95422

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
	Steamhast Samas (0) 00407 (000) 224 5402

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

Sample Receipt

FMI Gold & Copper - Sierrita ZS000001Z9	ACZ Projec Date Rece		6/29/201	L95422 2 09:02
	Receive Date Pri	•	6/	ksj 29/2012
Receipt Verification	Dale Fil	nieu.	0/.	29/2012
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?				Х
4) Are any samples NRC licensable material?	[Х
5) If samples are received past hold time, proceed with requested short hold time a	nalyses?	Х		
6) Is the Chain of Custody complete and accurate?			Х	
The 'sampled by' field on the Chain of Custody was not completed.	Ľ			
7) Were any changes made to the Chain of Custody prior to ACZ receiving the same	nples?		Х	
Samples/Containers				
	Γ	YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Tir	me?	Х		
11) For preserved bottle types, was the pH checked and within limits?		Х		
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?	[Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?	[Х		
Chain of Custody Related Remarks				
Client Contact Remarks				

Shipping Containers

Cooler Id	Temp (°C)	Rad (μ R/Hr)	Custody Seal Intact?
2877	5.3	15	Yes

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

2773 Downhill Drive Stear Report to: Name: Jon Anderson Company: Freeport-Mo E-mail: jonathan_ander Copy of Report to:	mboat Springs, CO 80487 (800) 3	34-5493					CHAIN of CUSTODY					
Name: Jon Anderson Company: Freeport-Mo E-mail: jonathan_ander												
Company: Freeport-Mo E-mail:jonathan_ander												
E-mail: jonathan_ander		_	Addre			Duval N						
		_	<u> </u>			ley, AZ	8561	4				
Copy of Report to:	son@fmi.com		Telepi	hone:	520-39	3-2714						
										i		
Name: Ben Daigneau			E-mai	I: bdaig	gneau(/	cleare	eekas	sociat	es.ccm			
Company: Clear Creek	Associates		Telepi	hone:	520-62	2-3222						
Invoice to:										i		
Name:			Addre	ss:								
Company:												
E-mail:			Telepi	hone:								
	at holding time (HT), or if insuffic				lete				YES			
	n, shall ACZ proceed with reque ntact client for further instructior				0"				NO			
	bceed with the requested analyse					a will be	qualifi	ied.				
Are samples for CO DW					·				YES			
	te forms. Results will be reporte	ed to PQL.							NO	x		
PROJECT INFORMAT	ION	ļ	ļ		′SES R	EQUEST	'ED (at	tach li:	st or µse	e quote nun	nber)	
Quote #:			ν	by EPA 300 or EPA 375								
Project/PO #: ZS00000	129	_	iner		<i>⋛</i>							
Reporting state for com	pliance testing:		Containers	300	Ē							
Sampler's Name:		_	of Co	EPA	a a							
Are any samples NRC I SAMPLE IDENTIFIC	licensable material? Yes No ATION DATE:TIME	Matrix	#	SO4 by	Quarterly							
M-10	06/25/12 : 1334	GW	3		×							
CCGV	06/26/12:0751	GW	1	×								
M-20	06/26/12:1142	GW	1	×					<u> </u>			
M-9	06/27/12:1428	GW	3	<u> </u>	×			-	<u> </u>			
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FRMAD050.01.15.09



Analytical Report

July 16, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000001Z9 ACZ Project ID: L95465

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 03, 2012. This project has been assigned to ACZ's project number, L95465. 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 L95465. 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 August 16, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - SierritaProject ID:ZS000001Z9Sample ID:M-8

ACZ Sample ID:	L95465-01
Date Sampled:	06/29/12 12:32
Date Received:	07/03/12
Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	24.00		mg/L	0.5	2.5	07/10/12 14:02	2 ccp



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refe	erences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			M300.0 - I	on Chron	natography	/							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325507													
WG325507ICV	ICV	07/02/12 14:03	WI120406-1	50.15		51.22	mg/L	102.1	90	110			
WG325507ICB	ICB	07/02/12 14:24				U	mg/L		-1.5	1.5			
WG325953													
WG325953LFB	LFB	07/10/12 12:59	WI120312-2	30		29.97	mg/L	99.9	90	110			
L95456-01DUP	DUP	07/10/12 13:41			164.7	166.02	mg/L				0.8	20	
L95465-01AS	AS	07/10/12 14:24	WI120312-2	30	24	53.09	mg/L	97	90	110			



(800) 334-5493

ACZ Project ID: L95465

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L95465

No certification qualifiers associated with this analysis

AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L95465		
ZS000001Z9	Date Rece		7/03/201	12 10:13		
	Receive	•	_	ks		
Receipt Verification	Date Pri	nted:	1	7/3/2012		
Receipt vernication		YES	NO	NA		
1) Is a foreign soil permit included for applicable samples?		120		X		
2) Is the Chain of Custody or other directive shipping papers present?		Х				
3) Does this project require special handling procedures such as CLP pro			Х			
4) Are any samples NRC licensable material?				Х		
5) If samples are received past hold time, proceed with requested short h	nold time analyses?	Х				
6) Is the Chain of Custody complete and accurate?		Х				
7) Were any changes made to the Chain of Custody prior to ACZ receiving	ng the samples?		Х			
Samples/Containers						
		YES	NO	NA		
8) Are all containers intact and with no leaks?		Х				
9) Are all labels on containers and are they intact and legible?		Х				
10) Do the sample labels and Chain of Custody match for Sample ID, Da	te, and Time?	Х				
11) For preserved bottle types, was the pH checked and within limits?						
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?	Х					
16) Is there an Hg-1631 trip blank present?				Х		
17) Is there a VOA trip blank present?				Х		
18) Were all samples received within hold time?	[Х				
Chain of Custody Related Remarks						
Client Contact Remarks						
Shipping Containers						
Cooler Id Temp (°C) Rad (µR/Hr)	Custody Seal Int	act?				

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

Yes

14

2145

3.6

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? YES	Company: Freeport-McMoRan Sicrita Inc. Green Valley, AZ 85614 E-mail: jonathan_anderson@fmi.com Telephone: 520-393-2714 Copy of Report to: E-mail: bdaigneau@clearcreckassociate Name: Ben Daigneau E-mail: bdaigneau@clearcreckassociate Company: Clear Creek Associates Telephone: 520-622-3222 Invoice to: Address: Name: Company: Clear Creek Associates Fermait: Telephone: 520-622-3222 If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall AC2 proceed with requested short HT analyses? Telephone: If worthen AC2 will contact client for further instruction. If neither "YES" nor 'NO' tis indicated. AC2 will proceed with the requested analysis, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? MALYSES REQUESTED (attract the figure of the requested to PQL. Project/PO #: ZS000001z9 E-mail: Del NTIFICATION AVALYSES REQUESTED (attract the figure of the requested short HT is expired, and data will be qualified. M-8 06/29/2012 12:32 Cyu 1 X Merix SW (Surface Water) - GW (Ground Water) - WW (Waste Water) DW (Drinking Water) - SU (Suigle) - SO (Soil) - OL (OI Merix SW (Surface Water) - GW (Ground Water) - WW (Waste Water) DW (Dr	YES NO YES NO	14 ssociates.com YES NO fied.	y, AZ 85614 2714 learcreekassoci 3222	en Valley, A 20-393-271 neau@clear 20-622-322	Green hone: 520 I: bdaigne hone: 520 ss: hone: complete lyses?	Teleph E-mail Teleph Addres Teleph nains to HT anal		n@fmi.com	Company: Freeport-McMoR E-mail: jonathan_anderson@ Copy of Report to: Name: Ben Daigneau
E-mail: jonathan_anderson@fmi.com Telephone: 520-393-2714 Copy of Report to: Image: Sen Daigneau Company: Clear Creek Associates E-mail: bdaigneau@clearcreekassociates.com Invoice to: Telephone: 520-622-3222 Name: Address: Company: E-mail: E-mail: Telephone: set associates Name: Address: Company: E-mail: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete yes YES If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO is indicated. ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. NO Are samples for CO DW Compliance Monitoring? YES NO Yes, please include state forms, Results will be reported to PQL. NO X PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote numbra of the samples for CO DW Compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No YES YES SAMPLE IDENTIFICATION DATE:TIME Matrix	E-mail: jonathan_anderson@fmi.com Telephone: 520-393-2714 Copy of Report to: Name: Ben Daigneau Company: Clear Creck Associates E-mail: bdaigneau@clearcreekassociate Invoice to: Name: Name: Company: E-mail: Address: Company: E-mail: bdaigneau@clearcreekassociate Invoice to: Name: Name: Company: E-mail: Interphone: S20-622-3222 Invoice to: Name: Mame: Company: E-mail: Address: Company: E-mail: bdaigneau@clearcreekassociate Invoice to: Name: If 'NO' then AC2 will contact clent for further instruction. If neither 'YES' nor 'NO' is indicated, AC2 will contact clent for further instruction. If neither 'YES' nor 'NO' If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ATTIME Quote #: Interphone: Project/PO #: ZS000001z9 Interphone: Sampler's Name: Interphone: Are any samples NRC licensable material? Yes No Interphone: SAMPL E IDENTIFICATION DATE:TIME	YES YES NO X	SSOCIATES.COM YES NO fied. YES	2714 learcreekassoci 3222	20-393-271 neau@clear 20-622-322	hone: 520 I: bdaigne hone: 520 ss: hone: o complete lyses?	E-mail Teleph Addres Teleph nains to HT anal		n@fmi.com	E-mail: jonathan_anderson@ Copy of Report to: Name: Ben Daigneau
Copy of Report to: Name: Ben Daigneau Company: Clear Creek Associates Invoice to: Name: Company: E-mail: Mame: Company: E-mail: Mare: Company: E-mail: Mare: Company: E-mail: 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? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix	Copy of Report to: Name: Ben Daigneau Company: Clear Creek Associates Invoice to: Name: Company: E-mail: 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? If 'NO' then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION Quote #: Project/PO #: ZS000001z9 Reporting state for compliance Monitoring? M-8 06/29/2012 06/29/2012 12:32 5µ/ 1 X 1 And there water) - GW (Ground Water) - WW (Waste Water) - DW (Drinking Water) - SL (Studge) - SO (Soil) - OL (Oil REMARKS	YES NO YES NO	YES NO fied. YES	earcreekassoci	neau@clear 20-622-322 ete	I: bdaigne hone: 520 ss: hone: o complete lyses?	E-mail Teleph Addres Teleph nains to HT anal			Copy of Report to: Name: Ben Daigneau
Name: Ben Daigneau E-mail: bdaigneau@clearcreekassociates.com Company: Clear Creek Associates Telephone: 520-622-3222 Invoice to: Address: Company: E-mail: Address: Company: E-mail: Telephone: Version Version E-mail: 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? NO Version If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO Version Version If yes, please include state forms. Results will be reported to PQL. NO X PROJECT INFORMATION Quote #: Project/PO #: ZS000001z9 Project/PO #: ZS000001z9 Version Version Version Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No Yes Version Version Are any samples NRC licensable material? Yes No Sampler's Marne: Matrix Version Version Version Sampler's Name: Are any samples NRC licensable material? Yes No Matrix Version Versin Versin Version	Name: E-mail: bddigncau(@clearcreckassociat. Ivoice to Itelephone: 520-622-3222 Ivoice to Address: Itelephone: Itelephone: Company: E-mail: Address: Itelephone: Itelephone: E-mail: Itelephone: Itelephone: Itelephone: Itelephone: If sample(s) received past holding time (HT), or if insufficient HT romains to complete analysis before expiration, shall ACZ proceed with requested short HT ranalyses? Itelephone: Itelephone: If 'No' then ACZ will contact client for further instruction. If neither 'YES' nor 'NO' Is indicated. ACZ will proceed with requested analyses, even If HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? If 'No' YES REQUESTED (affrabris) PROJECT INFORMATION ANALYSES REQUESTED (affrabris) Sampler's Name: Itelephone: Itelephone: Are any samples NRC licensable material? Yes No Sample's Name: Itelephone: Itelephone: M-8 06/29/2012 12:32 Guv' 1 X Itelephone: M-8 06/29/2012 12:32 Itelephone: Itelephone: Itelephone: Itelephone: Itelephone: Itelephone:	YES NO YES	YES NO fied. YES	3222	20-622-322	hone: 520 ss: hone: o complete lyses?	Addres Addres Teleph nains to HT anal		senciates	Name: Ben Daigneau
Company: Clear Creek Associates Telephone: 520-622-3222 Invoice to: Address: Name: Address: Company: Telephone: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? NO If "No" then ACZ will contact client for further instruction. If neither "YES" nor "NO" NO is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. Anal ysis please include state forms. Results will be reported to PQL. Are samples for CO DW Compliance Monitoring? YES X PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote number of the samples NRC licensable material? Yes No Yes Sampler's Name: Are any samples NRC licensable material? Yes No Yes SAMPLE IDENTIFICATION DATE:TIME Matrix	Company: Clear Creek Associates Telephone: 520-622-3222 Invoice to: Address: Name: Address: Company: E-mail: 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? If No° the AC2 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 CO DW Compliance Monitoring? If yes, plase include state for compliance Monitoring? If yes, plase include state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATESTIME M-8 06/29/2012 06/29/2012 12:32 Guut Image: Group Compliance Complia	YES NO YES	YES NO fied. YES	3222	20-622-322	hone: 520 ss: hone: o complete lyses?	Addres Addres Teleph nains to HT anal		senciates	· · · · · ·
Invoice to: Address: Name: Address: Company: Telephone: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? 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 CO DW Compliance Monitoring? YES If yes, please include state forms. Results will be reported to PQL. NO PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote number of the state for compliance testing: Sampler's Name: Samples NRC licensable material? Yes No Are any samples NRC licensable material? Yes No Sampler Matrix	Invoice to: Name: Company: E-mail: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall AC2 proceed with requested short HT analyses? If 'NO' then ACZ will contract 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION Quote #: Project/PO #: ZS00000129 Reporting state for compliance testing: Sample's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION OA/29/2012 1 X M-8 06/29/2012 1 X Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Sample's Name: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image: Image:	LES NO X	NO fied. YES		ete D"	ss: hone: o complete lyses?	Addres Teleph nains to HT anal		ecociates	Company [,] Clear Creek Asso
Name: Address: Company: Image: Company: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? 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. NO Are samples for CO DW Compliance Monitoring? YES YES If yes, please include state forms. Results will be reported to PQL. NO X PROJECT INFORMATION ANALYSES REOUESTED (attach list or use quote number) Quote #: Project/PO #: ZS00000129 Sumpler's Name: Are any samples NRC licensable material? Yes No Sumpler's Name: Sumpler's Name: Are any samples NRC licensable material? Yes No Sumpler's Name: Sumpler's Name: Are any samples NRC licensable material? Yes No Sumpler's Name: Sumpler's Name: Are any samples NRC licensable material? Yes No Sumpler's Name: Sumpler's Name:	Name: Address: Company:	LES NO X	NO fied. YES	ill be qualified.	D"	hone: o complete lyses?	Teleph nains to HT anal;		sociates	company: erem erem rees
Company: Telephone: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? ND 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. ND Are samples for CO DW Compliance Monitoring? YES	Company:	LES NO X	NO fied. YES	ill be qualified.	D"	hone: o complete lyses?	Teleph nains to HT anal;			Invoice to:
E-mail: Telephone: Telephone:	E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall AC2 proceed with requested short HT analyses? If "NO" then AC2 will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYSES REQUESTED (attach the Qualified) Quote #:	LES NO X	NO fied. YES	ill be qualified.	D"	o complete lyses?	nains to HT anal			Name:
If sample(s) received past holding time (HT), or if insufficient HT remains to complete YES analysis before expiration, shall ACZ proceed with requested short HT analyses? 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 CO DW Compliance Monitoring? YES	If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall AC2 proceed with requested short HT analyses? If 'NO' then AC2 will contact client for further instruction. If neither 'YES' nor 'NO' is indicated, AC2 will proceed with the requested analyses, even if HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYSES REQUESTED (attach lis Guote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix M-8 06/29/2012 12:32 GU 1 X Matrix M-8 06/29/2012 12:32 Matrix SW (Surface Water) - GW (Ground Water) - WW (Waste Water) - DW (Drinking Water) - SL (Sludge) - SO (Soil) - OL (Oil REMARKS UPS Tracking #1Z 867 7E4 23 1000 7910	LES NO X	NO fied. YES	ill be qualified.	D"	o complete lyses?	nains to HT anal		······	Company:
analysis before expiration, shall ACZ proceed with requested short HT analyses? N3 If "N0" then ACZ will contact client for further instruction. If neither "YES" nor "N0" is indicated, ACZ will proceed with the requested analyses, even If HT is expired, and data will be qualified. Are samples for CO DW Compliance Monitoring? YES If yes, please include state forms. Results will be reported to PQL. NO X PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote number Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix	analysis before expiration, shall ACZ proceed with requested short HT analyses? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION Quote #: Project/PO #: ZS00000129 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix M-8 06/29/2012 12:32 Matrix M-8 06/29/2012 12:32 Matrix SW (Surface Water) - GW (Ground Water) - WW (Waste Water) - SL (Studge) - SO (Soil) - OL (OII) REMARKS UPS Tracking #1Z 867 7E4 23 1000 7910	LES NO X	NO fied. YES	ill be qualified.	D"	lyses?	HT an alg			E-mail:
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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix	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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYSES REQUESTED (attach lis Quote #: Project/PO f: ZS00000129 Reporting state for compliance testing: Sample's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME Matrix M-8 06/29/2012 12:32 500 1 X 1 X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	J. YES NO X	fied. YE:S	ill be qualified.		,		ted short	• • •	• • • •
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If yes, please include state forms. Results will be reported to PQL. NO X PROJECT INFORMATION ANALYSES REQUESTED (attach list or use guote number of the project/PO #: ZS000001z9 Project/PO #: ZS000001z	If yes, please include state forms, Results will be reported to PQL. ANALYSES REQUESTED (attach its PROJECT INFORMATION ANALYSES REQUESTED (attach its Quote #:	NO X			no data wili t	pired, and				
PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote number quote number) Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No The material? Yes No SAMPLE IDENTIFICATION DATE:TIME	PROJECT INFORMATION ANALYSES REQUESTED (attach lik Quote #:									
Quote #: Project/PO #: ZS000001z9 Reporting state for compliance testing: Sampler's Name: Are any samples NRC licensable material? Yes No SAMPLE IDENTIFICATION DATE:TIME	Quote #:	annist or use quote nu						to PQL.		
Project/PO #: ZS000001z9 Project/PO #: ZS000001z9 Reporting state for compliance testing: Project/PO #: ZS000001z9 Sampler's Name: Project/PO #: ZS000001z9 Are any samples NRC licensable material? Yes No Project/PO #: ZS000001z9 SAMPLE IDENTIFICATION DATE:TIME	Project/PO #: ZS0000129 gradient for compliance testing: gradient for compliance testing: Sampler's Name:		line instoruse			ANALYSE				
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August 10, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000002PM ACZ Project ID: L95934

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 31, 2012. This project has been assigned to ACZ's project number, L95934. 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 L95934. 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 September 10, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







Project ID:	ZS000002PM
Sample ID:	MH-27

Inorganic Analytical Results

ACZ Sample ID:	L95934-01
Date Sampled:	07/30/12 11:20
Date Received:	07/31/12
Sample Matrix:	Ground Water

Metals Analysis								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U	mg/L	0.0004	0.002	08/03/12 12:05	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0003	В	mg/L	0.0002	0.001	08/03/12 12:05	msh
Beryllium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	08/03/12 12:05	msh
Cadmium, dissolved	M200.8 ICP-MS	0.0002	В	mg/L	0.0001	0.0005	08/03/12 12:05	msh
Chromium, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	08/02/12 13:38	jjc
Cobalt, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	08/02/12 13:38	jjc
Copper, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	08/02/12 13:38	jjc
Lead, dissolved	M200.8 ICP-MS	0.0001	В	mg/L	0.0001	0.0005	08/03/12 12:05	msh
Magnesium, dissolved	M200.7 ICP	131		mg/L	0.2	1	08/02/12 13:38	jjc
Molybdenum, dissolved	d M200.7 ICP	0.04	В	mg/L	0.01	0.05	08/02/12 13:38	jjc
Nickel, dissolved	M200.8 ICP-MS	0.0025	В	mg/L	0.0006	0.003	08/03/12 12:05	msh
Selenium, dissolved	M200.8 ICP-MS	0.0002	В	mg/L	0.0001	0.0003	08/03/12 12:05	msh
Thallium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	08/03/12 12:05	msh
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6	*	mg/L	0.1	0.5	08/06/12 14:03	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.42		mg/L	0.02	0.1	08/09/12 14:17	tcd
Residue, Filterable (TDS) @180C	SM2540C	2550		mg/L	10	20	08/02/12 10:54	las
Sulfate	D516-02 - Turbidimetric	800	*	mg/L	100	500	08/09/12 19:40	tcd



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000002PM

Antimony, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.02		.02004	mg/L	100.2	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0012	0.0012			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.01		.0103	mg/L	103	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.01	U	.00904	mg/L	90.4	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.01	U	.00902	mg/L	90.2	70	130	0.22	20	
Arsenic, dissolv	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.04976	mg/L	99.5	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0006	0.0006			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04841	mg/L	96.7	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0003	.04348	mg/L	86.3	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0003	.04629	mg/L	91.9	70	130	6.26	20	
Beryllium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.04565	mg/L	91.3	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.0501		.04627	mg/L	92.4	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.0501	U	.04469	mg/L	89.2	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.0501	U	.04564	mg/L	91.1	70	130	2.1	20	
Cadmium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05035	mg/L	100.7	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.0501		.04919	mg/L	98.2	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.0501	.0002	.0434	mg/L	86.2	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.0501	.0002	.04525	mg/L	89.9	70	130	4.17	20	
Chromium, diss	olved		M200.7 IC	Р									
ACZ ID			PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
	Туре	Analyzed	PCN/SCN		-								
WG327526	Туре	Analyzed	PCN/SCN										
	Type	Analyzed 08/02/12 12:36	II120711-1	2		1.96	mg/L	98	95	105			
WG327526						1.96 U	mg/L mg/L	98	95 -0.03	105 0.03			
WG327526 WG327526ICV WG327526ICB	ICV	08/02/12 12:36					-	98 98.4					
WG327526 WG327526ICV	ICV ICB	08/02/12 12:36 08/02/12 12:42	II120711-1	2	U	U	mg/L		-0.03	0.03			

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (4 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000002PM

Cobalt, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.925	mg/L	96.3	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.479	mg/L	95.8	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	.5	U	.478	mg/L	95.6	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	U	.473	mg/L	94.6	85	115	1.05	20	
Copper, dissolv	ed		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.936	mg/L	96.8	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.482	mg/L	96.4	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	.5	U	.485	mg/L	97	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	U	.485	mg/L	97	85	115	0	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327656													
WG327656ICV	ICV	08/06/12 13:42	WC120730-	2.002		1.91	mg/L	95.4	95	105			
WG327656ICB	ICB	08/06/12 13:47				U	mg/L		-0.3	0.3			
WG327656LFB1	LFB	08/06/12 13:54	WC120601-	5.005		4.67	mg/L	93.3	90	110			
L95934-01AS	AS	08/06/12 14:06	WC120601-	5.005	.6	4.93	mg/L	86.5	90	110			M2
L95934-01DUP	DUP	08/06/12 14:09			.6	.65	mg/L				8	20	RA
Lead, dissolved			M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05168	mg/L	103.4	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04993	mg/L	99.8	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0001	.05016	mg/L	100	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0001	.05213	mg/L	104	70	130	3.85	20	
Magnesium, dis	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	100		100.25	mg/L	100.3	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.6	0.6			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	50.007		49.5	mg/L	99	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	50.007	4.6	53.81	mg/L	98.4	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	50.007	4.6	53.49	mg/L	97.8	85	115	0.6	20	

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (8 (800) 334-5493

Inorganic QC Summary

ACZ Project ID: L95934

Project ID:

ZS000002PM

FMI Gold & Copper - Sierrita

Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.97	mg/L	98.5	95	105			
NG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
NG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.49	mg/L	98	85	115			
_95916-01AS	AS	08/02/12 13:04	II120717-3	.5	.04	.513	mg/L	94.6	85	115			
.95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	.04	.512	mg/L	94.4	85	115	0.2	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
NG327542													
VG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.0501	mg/L	100.2	90	110			
VG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0018	0.0018			
NG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04946	mg/L	98.8	85	115			
_95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0025	.03901	mg/L	72.9	70	130			
_95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0025	.04175	mg/L	78.4	70	130	6.79	20	
Nitrate/Nitrite as	N		M353.2 - I	H2SO4 pr	eserved								
CZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
VG327899													
VG327899ICV	ICV	08/09/12 14:05	WI120706-1	2.416		2.474	mg/L	102.4	90	110			
VG327899ICB	ICB	08/09/12 14:06				U	mg/L		-0.06	0.06			
VG327899LFB1	LFB	08/09/12 14:10	WI120211-3	2		1.97	mg/L	98.5	90	110			
_95848-02DUP	DUP	08/09/12 14:15			2.56	2.543	mg/L				0.7	20	
NG327899LFB2	LFB	08/09/12 14:44	WI120211-3	2		1.96	mg/L	98	90	110			
_95848-01AS	AS	08/09/12 16:18	WI120211-3	40	4	42.74	mg/L	96.9	90	110			
Residue, Filtera	ble (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
NG327525													
NG327525PBW	PBW	08/02/12 10:51				U	mg/L		-20	20			
NG327525LCSW	LCSW	08/02/12 10:52	PCN38662	260		270	mg/L	103.8	80	120			
.95955-03DUP	DUP	08/02/12 11:06	. 01100002	200	810	802	mg/L	100.0	50	120	1	20	
Selenium, disso	lved		M200.8 IC	P-MS			-						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
NG327542													
		00/02/10 10-51	M0100740 0	05		05000	m ~ //	104.0	00	140			
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05229	mg/L	104.6	90	110			
VG327542ICB	ICB	08/03/12 10:58				.0001	mg/L		-0.0003	0.0003			
NG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04969	mg/L	99.3	85	115			
_95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0002	.0447	mg/L	88.9	70	130			
_95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0002	.04996	mg/L	99.4	70	130	11.11	20	

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000002PM

Sulfate			D516-02 -	Turbidime	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327943													
WG327943ICB	ICB	08/09/12 16:38				U	mg/L		-3	3			
WG327943ICV	ICV	08/09/12 16:38	WI120727-2	20		19.6	mg/L	98	90	110			
WG327943LFB	LFB	08/09/12 19:22	WI120508-1	10		9.6	mg/L	96	90	110			
L95930-10DUP	DUP	08/09/12 19:25			20	19	mg/L				5.1	20	RA
L95934-01AS	AS	08/09/12 19:40	SO4TURB10	10	800	760	mg/L	-400	90	110			M3
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05175	mg/L	103.5	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.05014	mg/L	100.2	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	U	.05142	mg/L	102.7	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	U	.05341	mg/L	106.7	70	130	3.8	20	



(800) 334-5493

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95934-01	WG327656	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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327943	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L95934

No certification qualifiers associated with this analysis

AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L95934
ZS000002PM	Date Rec		7/31/20′	
	Receive Date Pr	•	7/	ksj 31/2012
Receipt Verification	Date Fi	initeu.	//	31/2012
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP proto	ocol?			Х
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hol	ld time analyses?	Х		
6) Is the Chain of Custody complete and accurate?		Х		
7) Were any changes made to the Chain of Custody prior to ACZ receiving	the samples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date	, and Time?	Х		
11) For preserved bottle types, was the pH checked and within limits?		Х		
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
Chain of Custody Related Remarks				
Client Contact Remarks				
Shipping Containers				
Cooler Id Temp (°C) Rad (µR/Hr)	Custody Seal Int	tact?		

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

Yes

15

3742

5.9

Name: Jon Anderson Company: Freeport-McMoRan Sierrita Inc. E-mail: aaron_hilshorst@fmi.com Company: Report to: Name: Ben Daigneau Company: Clear Creek associates Inverse to: Name: Company: Clear Creek associates Inverse to: Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with requess if "NO" then ACZ will contact client for further instruction		Telep E-mai Telep Addre	Greer hone: 52 I: bdaign hone: 52	W. Duval n Valley, . 0-648-884 eau@clea 0-622-322	AZ 856 14 rcreeka	14	es.com	
E-mail: aaron_hilshorst@fmi.com Course at Report 1:: Name: Ben Daigneau Company: Clear Creek associates Invonce to: Name: Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		E-mai Telep Addre	hone: 52 I: bdaign hone: 52	0-648-884 eau@clea	14 rcreeka		es.com	
German et Report to: Name: Ben Daigneau Company: Clear Creek associates Inverse to: Name: Company: E-mail: If sample(s) received past holding time (HT), or if insufficianalysis before expiration, shall ACZ proceed with request for "NO" then ACZ will contact client for further instruction		E-mai Telep Addre	I: bdaign hone: 52	eau@clea	rcreeka	ssociate	es.com	
Name: Ben Daigneau Company: Clear Creek associates If you of the Name: Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		Telep Addre	hone: 52			ssociat	es.com	
Company: Clear Creek associates Involue to: Name: Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		Telep Addre	hone: 52			ssociat	es.com	
IFYOREO (G) Name: Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		Addre		0-622-322	22			
Name: Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction			ss:					
Company: E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction			SS:					
E-mail: If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		Talan						
If sample(s) received past holding time (HT), or if insuffici analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		Tolon						
analysis before expiration, shall ACZ proceed with reques If "NO" then ACZ will contact client for further instruction		Lieleb	hone:					
If "NO" then ACZ will contact client for further instruction				e			YES	
			-				NO	
is indicated, ACZ will proceed with the requested analyse					be qualii	ïed.		
Are samples for CO DW Compliance Monitoring?							YES	
If yes, please include state forms. Results will be reported PROJECT INFORMATION	I to PQL.		A.7	SRED JE	·	· ·	NO	×
Quote #:		 						
Project/PO #: ZS000002PM	-	sa						
Reporting state for compliance testing:	-	taine	ا ک					
Sampler's Name: Robert Carper	-	of Containers	1 2					
Are any samples NRC licensable material? Yes No	-	# of	Quarterly					
SAMPLE DENTIFICATION DATE: UNI	Muta x		σ.					
MH-27 7-30-12 11:20	GW	3	×					
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		1						

FRMAD050.01.15.09

White - Return with sample. Yellow - Retain for your records.



August 21, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000002PM ACZ Project ID: L96143

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 10, 2012. This project has been assigned to ACZ's project number, L96143. 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 L96143. 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 September 21, 2012. 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.

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Sue Webber has reviewed and approved this report.





ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	MO-2007-3B

ACZ Sample ID: **L96143-01** Date Sampled: 08/07/12 11:55 Date Received: 08/10/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.26		mg/L	0.5	2.5	08/16/12 19:08	3 jlf

ACZ	Laboratories	s, Inc.
2773 Downhill Drive	Steamboat Springs, CO 8	80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	MO-2007-3C

ACZ Sample ID: L96143-02 Date Sampled: 08/07/12 16:48 Date Received: 08/10/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	93.25		mg/L	2.5	12.5	08/16/12 19:50	0 jlf



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refe	erences						
(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, Third Edition with Update III, December 1996.						
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).						
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.						

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

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

Sulfate	M300.0 - Ion Chromatography												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327284													
WG327284ICV	ICV	07/31/12 14:23	WI120709-7	50		50.56	mg/L	101.1	90	110			
WG327284ICB	ICB	07/31/12 14:44				U	mg/L		-1.5	1.5			
WG328304													
L96143-01DUP	DUP	08/16/12 19:29			36.26	36.21	mg/L				0.1	20	
L96143-02AS	AS	08/16/12 20:11	WI120312-2	150	93.25	246.73	mg/L	102.3	90	110			
WG328304LFB	LFB	08/17/12 0:45	WI120312-2	30		30.58	mg/L	101.9	90	110			



(800) 334-5493

ACZ Project ID: L96143

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L96143

No certification qualifiers associated with this analysis

AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

 ecceipt Verification Is a foreign soil permit included for applicable samples? Is the Chain of Custody or other directive shipping papers present? Does this project require special handling procedures such as CLP protocol? Are any samples NRC licensable material? If samples are received past hold time, proceed with requested short hold time analyst Is the Chain of Custody complete and accurate? Were any changes made to the Chain of Custody prior to ACZ receiving the samples Imples/Containers Are all containers intact and with no leaks? Are all abels on containers and are they intact and legible? Do the sample labels and Chain of Custody match for Sample ID, Date, and Time? Is the custody seal intact on all containers? Are samples that require zero headspace acceptable? Are all sample containers appropriate for analytical requirements? Is there an Hg-1631 trip blank present? Is there a VOA trip blank present? Were all samples received within hold time? 	ACZ Project ID			ID: L96143		
) Is a foreign soil permit included for applicable samples? e) Is the Chain of Custody or other directive shipping papers present? e) Does this project require special handling procedures such as CLP protocol? e) Are any samples NRC licensable material? e) If samples are received past hold time, proceed with requested short hold time analysis? f) Is the Chain of Custody complete and accurate? f) Were any changes made to the Chain of Custody prior to ACZ receiving the samples imples/Containers e) Are all containers intact and with no leaks? e) Are all labels on containers and are they intact and legible? f) For preserved bottle types, was the pH checked and within limits? g) Is there sufficient sample volume to perform all requested work? g) Is the custody seal intact on all containers? e) Are all sample containers appropriate for analytical requirements? f) Are all sample containers appropriate for analytical requirements? f) Is there an Hg-1631 trip blank present? g) Were all samples received within hold time? 			ived: 08/10/201			
) Is a foreign soil permit included for applicable samples? e) Is the Chain of Custody or other directive shipping papers present? e) Does this project require special handling procedures such as CLP protocol? e) Are any samples NRC licensable material? e) If samples are received past hold time, proceed with requested short hold time analysis? f) Is the Chain of Custody complete and accurate? f) Were any changes made to the Chain of Custody prior to ACZ receiving the samples imples/Containers e) Are all containers intact and with no leaks? e) Are all labels on containers and are they intact and legible? f) For preserved bottle types, was the pH checked and within limits? g) Is there sufficient sample volume to perform all requested work? g) Is the custody seal intact on all containers? e) Are all sample containers appropriate for analytical requirements? f) Are all sample containers appropriate for analytical requirements? f) Is there an Hg-1631 trip blank present? g) Were all samples received within hold time? 	Receive	•	0/	ks		
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3647 3.4 12 Yes						

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

to: on Anderson y: Freeport-McMoRa onathan_anderson@f Report to: Ben Daigneau y: Clear Creek Assoc	ìmi.com		Telep	Gro		uval Mine ey, AZ 85 -2714			
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PO #: ZS000002PM		_	ner						
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LE IDENTIFICATION	DATE:TIME	Matrix		ŝ					
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FRMAD050.01.15.09



August 28, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000002PM ACZ Project ID: L96276

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 17, 2012. This project has been assigned to ACZ's project number, L96276. 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 L96276. 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 September 28, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.







Project ID:	ZS000002PM
Sample ID:	MO-2007-6A

ACZ Sample ID: L96276-01 Date Sampled: 08/13/12 10:07 Date Received: 08/17/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.91		*	mg/L	0.5	2.5	08/25/12 0:00	jlf



Project ID:	ZS000002PM
Sample ID:	MO-2007-6B

ACZ Sample ID: L96276-02 Date Sampled: 08/13/12 12:12 Date Received: 08/17/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	56.54		*	mg/L	0.5	2.5	08/25/12 0:21	jlf



Project ID:	ZS000002PM
Sample ID:	MO-2007-4B

ACZ Sample ID:	L96276-03
Date Sampled:	08/13/12 14:48
Date Received:	08/17/12
Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.02	*	mg/L	0.5	2.5	08/25/12 0:42	jlf



Project ID:	ZS000002PM
Sample ID:	MO-2007-4C

ACZ Sample ID: L96276-04 Date Sampled: 08/13/12 15:12 Date Received: 08/17/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.22		*	mg/L	0.5	2.5	08/25/12 1:03	jlf



Project ID:	ZS000002PM
Sample ID:	MO-2007-4A

ACZ Sample ID: L96276-05 Date Sampled: 08/13/12 15:48 Date Received: 08/17/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	35.33		*	mg/L	0.5	2.5	08/25/12 1:25	jlf

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - SierritaACZ Sample ID:L96276-06Project ID:ZS000002PMDate Sampled:08/15/12 13:39Sample ID:NP-2Date Received:08/17/12Sample Matrix:Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	65.72		mg/L	0.5	2.5	08/25/12 2:07	jlf

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	MO-2009-1

ACZ Sample ID: L96276-07 Date Sampled: 08/15/12 15:31 Date Received: 08/17/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	102.40		mg/L	1	5	08/25/12 2:49	jlf

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	DUP20120813A

ACZ Sample ID: L96276-08 Date Sampled: 08/13/12 00:00 Date Received: 08/17/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.48		mg/L	0.5	2.5	08/25/12 4:13	jlf



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Project ID: L96276

Sulfate			M300.0 - Io	on Chror	natography	/							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG328910													
WG328910ICV	ICV	08/23/12 17:39	WI120709-7	50		50.64	mg/L	101.3	90	110			
WG328910ICB	ICB	08/23/12 18:00				U	mg/L		-1.5	1.5			
WG328997													
WG328997LFB1	LFB	08/24/12 15:34	WI120822-4	30		28.88	mg/L	96.3	90	110			
L96223-03DUP	DUP	08/24/12 21:11			24.36	25.06	mg/L				2.8	20	
L96223-04AS	AS	08/24/12 21:53	WI120822-4	150	250.58	419.7	mg/L	112.7	90	110			M1
WG328997LFB2	LFB	08/25/12 1:46	WI120822-4	30		31.07	mg/L	103.6	90	110			
L96276-06DUP	DUP	08/25/12 2:28			65.72	65.28	mg/L				0.7	20	
L96276-07AS	AS	08/25/12 3:10	WI120822-4	60	102.4	167.36	mg/L	108.3	90	110			



Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: L96276

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96276-01	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-02	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-03	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-04	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-05	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.



ACZ Project ID: L96276

No certification qualifiers associated with this analysis

AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493 4

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje			L96276
ZS00002PM	Date Rece		8/17/201	
	Receive	•	0/	ks 47/004
Receipt Verification	Date Pri	inted:	8/	17/201:
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?		_		Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?				Х
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time an	alyses?	Х		
6) Is the Chain of Custody complete and accurate?		Х		
7) Were any changes made to the Chain of Custody prior to ACZ receiving the same	oles?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Tim	e?	Х		
11) For preserved bottle types, was the pH checked and within limits?				Х
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
Chain of Custody Related Remarks				
Client Contact Remarks				
Shipping Containers				
Cooler Id Temp (°C) Rad (µR/Hr) Custod	y Seal Int	act?		

 Cooler Id
 Temp (°C)
 Rad (µR/Hr)
 Custody Seal Intact?

 ----- ----- ----- -----

 NA15985
 3
 17
 Yes

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

eport to:												
ame: Jon Anderson		_	Address: 6200 W. Duval Mine Road									
ompany: Freeport-McM	oRan Sierrita Inc.	_	Green Valley, AZ 85614									
-mail: jonathan_andersor	@fmi.com		Teleph	none: 5	20-393-27	14			- <u> </u>			
opy of Report to:				-								
Jame: Ben Daigneau			E-mail	: bdaig	neau@clea	arcreekasso	ciates.com					
Company: Clear Creek Associates			Telept	none: 5	20-622-32	22						
voice to:		 										
			Addre	ee'								
ame:			Auure	33.								
ompany:			Telep									
-mail:	olding time (HT), or if insuffici	 ient HT rer	- فن - حـــــــــــــــــــــــــــــــــــ		ete		YES	[[]	·			
alysis before expiration,	shall ACZ proceed with reques	sted short	HT ana	lyses?			NO					
"NO" then ACZ will conta	ct client for further instruction	. If neithe	r "YES"	nor "N	O"		d					
	ed with the requested analyse	es, even if	ni is ex	pired, a	ing data Wil	i ve qualitie	a. YES					
re samples for CO DW Co ves, please include state	forms. Results will be reporte	d to PQL.					NO	×				
ROJECT INFORMATIO				ANALY	SES REQU	ESTED (atta	ach list or us	e quote nu	mber)			
uote #:				375								
roject/PO #: ZS000002F	 M		ers	EPA				{				
eporting state for compli			of Containers	300 or								
ampler's Name:		_	US I	EPA 30								
	ensable material? Yes No		fe te	<u>ک</u>								
SAMPLE IDENTIFICAT		Matrix		S04								
MO-2007-6A	08/13/12;1007	GW	1	×								
MO-2007-6B	08/13/12;1212	GW	1	×								
MO-2007-4B	08/13/12;1448	GW	1	×								
MO-2007-4C	08/13/12;1512	GW	1	×								
MO-2007-4A	08/13/12 ; 1548	GW	1	×					. <u> </u>			
NP-2	08/15/12;1339	GW	1	×					- <u></u>			
MO-2009-1	08/15/12;1531	GW	1	×								
DUP20120813A	08/13/2012	GW	1	×								
			1									
									•			
Matrix SW (Surface Wate	er) · GW (Ground Water) · WW (Was	te Water) · D	W (Drink	ing Wate	r) SL (Sludge	e) · SO (Soil) ·	OL (Oil) · Othe	r (Specify)				
EMARKS												
JPS Tracking #1Z 867	754 23 1000 7974											
JF 5 Hacking #12 807	124 25 1000 1714											
		e oonditi	one los	ated or	the rever	so side of th	vis COC					
RELINQUISHE	Please refer to ACZ's terms	s & condit TIME						DATE:	TIME			
ALEXIS ALVARĘZ 🍃	1 08/16/12	: 1500	1		/							

Page 15 of 15



September 12, 2012

Report to: Jon Anderson FMI Gold & Copper - Sierrita 6200 West Duval Mine Rd. Green Valley, AZ 85614

cc: Ben Daigneau

Bill to: Accounts Payable FMI Gold & Copper - Sierrita P.O. Box 2671 Phoenix, AZ 85002-2671

Project ID: ZS000002PM ACZ Project ID: L96509

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 31, 2012. This project has been assigned to ACZ's project number, L96509. 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 L96509. 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 October 12, 2012. 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.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





ACZ	Laboratories	s, Inc.
	Steamboat Springs, CO 8	-

Project ID:	ZS000002PM
Sample ID:	CW-10

ACZ Sample ID: **L96509-01** Date Sampled: 08/29/12 09:00 Date Received: 08/31/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	50.95		mg/L	0.5	2.5	09/05/12 3:26	jlf

ACZ	Laboratories	s, Inc.
	Steamboat Springs, CO 8	-

Project ID:	ZS000002PM	Date Sample
Sample ID:	CW-6	Date Received
		Sample Matrix

ACZ Sample ID: **L96509-02** Date Sampled: 08/29/12 09:48 Date Received: 08/31/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	82.24		mg/L	0.5	2.5	09/06/12 15:17	' lhb

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	CW-9

ACZ Sample ID: **L96509-03** Date Sampled: 08/29/12 10:41 Date Received: 08/31/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	43.94		mg/L	0.5	2.5	09/06/12 15:59) lhb

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	GV-1

ACZ Sample ID: L96509-04 Date Sampled: 08/29/12 12:18 Date Received: 08/31/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.15		mg/L	0.5	2.5	09/06/12 16:41	lhb

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

FMI Gold & Copper - SierritaACZ SProject ID:ZS000002PMDateSample ID:GV-2Date

ACZ Sample ID:	L96509-05
Date Sampled:	08/29/12 12:34
Date Received:	08/31/12
Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	62.98		mg/L	0.5	2.5	09/06/12 17:02	l lhb

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID:	ZS000002PM
Sample ID:	DUP20120829A

ACZ Sample ID: L96509-06 Date Sampled: 08/29/12 00:00 Date Received: 08/31/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	63.26		mg/L	0.5	2.5	09/06/12 17:24	1 lhb



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

ACZ Project ID: L96509

Sulfate			M300.0 - Io	on Chron	natography	/							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG328910													
WG328910ICV	ICV	08/23/12 17:39	WI120709-7	50		50.64	mg/L	101.3	90	110			
WG328910ICB	ICB	08/23/12 18:00				U	mg/L		-1.5	1.5			
WG329545													
WG329545LFB	LFB	09/04/12 17:35	WI120822-4	30		31.95	mg/L	106.5	90	110			
L96491-01DUP	DUP	09/04/12 23:12			479.5	487.7	mg/L				1.7	20	
L96502-01AS	AS	09/04/12 23:55	WI120822-4	30	38.34	66.56	mg/L	94.1	90	110			
WG329668													
WG329668LFB	LFB	09/06/12 14:14	WI120822-4	30		30.31	mg/L	101	90	110			
L96509-02DUP	DUP	09/06/12 15:38			82.24	82.41	mg/L				0.2	20	
L96509-03AS	AS	09/06/12 16:20	WI120822-4	30	43.94	72.13	mg/L	94	90	110			



(800) 334-5493

ACZ Project ID: L96509

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM PARAMETER	METHOD	QUAL DESCRIPTION	

No extended qualifiers associated with this analysis



ACZ Project ID: L96509

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
	01

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

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje	ect ID:		L96509
ZS00002PM	Date Rece		8/31/201	2 10:20
	Receive	•	0.4	ksj
Receipt Verification	Date Pr	inted:	8/3	31/2012
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				Х
2) Is the Chain of Custody or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?				Х
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time a	nalyses?	Х		
6) Is the Chain of Custody complete and accurate?			Х	
The 'sampled by' field on the Chain of Custody was not completed.				
7) Were any changes made to the Chain of Custody prior to ACZ receiving the sam	ples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Tin	ne?	Х		
11) For preserved bottle types, was the pH checked and within limits?				Х
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
Chain of Custody Related Remarks				
Client Contact Remarks				

Shipping Containers

Cooler Id	Temp (°C)	Rad (μ R/Hr)	Custody Seal Intact?
NA16085	1.1	17	Yes

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

Company: Freeport-McMoRan Sierrita Inc. Greet E-mail: jonathan_anderson@fmi.com, Telephone: 52 Copy of Report to E-mail: bdaign Name: Ben Daigneau E-mail: bdaign Company: Clear Creek Associates Telephone: 52 Invoice to: Address: Company: E-mail: E-mail: Telephone: 52 Invoice to: Address: Company: E-mail: E-mail: Telephone: 52 If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? 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, ar Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.	neau@clearcreekas 20-622-3222 ate		
Company: Freeport-McMoRan Sierrita Inc. Greet E-mail: jonathan_anderson@fmi.com, Telephone: 52 Copy of Report to E-mail: bdaign Name: Ben Daigneau E-mail: bdaign Company: Clear Creek Associates Telephone: 52 Invoice to: Address: Name: Company: E-mail: Telephone: 52 Invoice to: Address: Company: E-mail: E-mail: Telephone: 52 If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? 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, ar Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION	en Valley, AZ 8561 20-648-8844 neau@clearcreekas 20-622-3222	ssociates.com	
E-mail: jonathan_anderson@fmi.com, Telephone: 52 Copy_of Report to E-mail: bdaign Name: Ben Daigneau E-mail: bdaign Company: Clear Creek Associates Telephone: 52 Invoice to: Address: Company: E-mail: E-mail: Address: Company: E-mail: E-mail: Telephone: 52 Invoice to: Address: Company: E-mail: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NOI is indicated, ACZ will proceed with the requested analyses, even if HT is expired, ar Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION	20-648-8844 neau@clearcreekas 20-622-3222	ssociates.com	
Copy of Report to Name: Ben Daigneau E-mail: bdaign Company: Clear Creek Associates Telephone: 52 Invoice to: Address: Name: Address: Company: E-mail: E-mail: Telephone: 52 Invoice to: Address: Name: Company: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to compleanalysis before expiration, shall ACZ proceed with requested short HT analyses? If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NOi is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION	neau@clearcreekas 20-622-3222 ate	YES	
Name: Ben Daigneau E-mail: bdaign Company: Clear Creek Associates Telephone: 52 Invoice to: Address: Name: Address: Company: E-mail: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NOI is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYS	20-622-3222 este	YES	
Name:	20-622-3222 este	YES	
Invorce to: Name: Address: Company: Telephone: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? 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 Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION	ete D"		
Name: Address: Company: Telephone: E-mail: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? Telephone: If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NCI is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYS	כ"		
Name: Image: Company: E-mail: Image: Telephone: If sample(s) received past holding time (HT), or if insufficient HT remains to compleanalysis before expiration, shall ACZ proceed with requested short HT analyses? 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 Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION	כ"		
E-mail: If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? 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, ar Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYS	כ"		
If sample(s) received past holding time (HT), or if insufficient HT remains to comple analysis before expiration, shall ACZ proceed with requested short HT analyses? 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, ar Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION	כ"		
analysis before expiration, shall ACZ proceed with requested short HT analyses? 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 Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYS	כ"		1
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, an Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYS	D" nd data will be quali		
is indicated, ACZ will proceed with the requested analyses, even if HT is expired, an Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL. PROJECT INFORMATION ANALYS	nd data will be quali		
If yes, please include state forms. Results will be reported to PQL. PROJECTINFORMATION ANALYS		fied. YES	
PROJECT INFORMATION ANALYS		NO	×
PROJECT INFORMATION	SES REOUESTED (2		
Quote #:			
Reporting state for compliance testing: 2 8 Sampler's Name: 0 4			
Sampler's Name: O 습 Are any samples NRC licensable material? Yes No # # 4			
Are any samples NRC licensable material? Yes No 아 값 SAMPLE IDENTIFICATION DATE: HML			
CW-10 8/29/12 ; 0900 GW 1 ×			
CW-6 8/29/12 ; 0948 GW 1 ×			
CW-9 8/29/12 ; 09/10 GW 1 X			
GV-1 8/29/12 ; 1218 GW 1 X			
GV-2 8/29/12 ; 1234 GW 1 ×			
DUP20120829A 8/29/12 GW 1 ×			
Derzeizeezen			
Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water REMARKS UPS Tracking # 1Z 867 7E4 23 1000 7992			

FRMAD050.01.15.09

White - Return with sample. Yellow - Retain for your records.



Analytical Report

Jon Anderson FMI Gold & Copper - Sierrita P.O. Box 527 6200 West Duval Mine Road Green Valley, AZ 85622-0527

Cc: Ben Daigneau

Project ID: ZS000001JL ACZ Project ID: L94261– SULFATE ONLY

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 27, 2012. This project was assigned to ACZ's project number, **L94261**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94261**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





REPAD.01.11.00.01

May 09, 2012



Project ID:	ZS000001JL
Sample ID:	MH-14

ACZ Sample ID: L94261-01 Date Sampled: 04/25/12 00:00 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1700	*	mg/L	100	600	05/07/12 11:25	сср



Project ID:	ZS000001JL
Sample ID:	M-18

ACZ Sample ID: L94261-02 Date Sampled: 04/25/12 00:00 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	2000	*	mg/L	100	500	05/07/12 11:25	сср



Project ID:	ZS000001JL
Sample ID:	MH-16W

ACZ Sample ID: L94261-03 Date Sampled: 04/25/12 00:00 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	490	*	mg/L	30	100	05/07/12 11:13	сср



Project ID:	ZS000001JL
Sample ID:	M-16

ACZ Sample ID: L94261-04 Date Sampled: 04/25/12 00:00 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1210	*	mg/L	40	200	05/07/12 13:41	tcd



Project ID:	ZS000001JL
Sample ID:	MH-15W

ACZ Sample ID: L94261-05 Date Sampled: 04/25/12 00:00 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1810	*	mg/L	60	300	05/07/12 13:51	tcd



Project ID:	ZS000001JL
Sample ID:	MH-21

ACZ Sample ID: L94261-06 Date Sampled: 04/24/12 00:00 Date Received: 04/27/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	910	*	mg/L	40	200	05/07/12 13:41	tcd



FMI Gold & Cop	oper - Sierrita	ACZ Sample ID:	L94261-07
Project ID:	ZS000001JL	Date Sampled:	04/24/12 00:00
Sample ID:	MH-22	Date Received:	04/27/12
		Sample Matrix:	Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	2700		mg/L	100	500	05/07/12 13:50	tcd



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
Н	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 Refer	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

Inorganic QC Summary

ACZ Project ID: L94261

Project ID:

ZS000001JL

Antimony, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.02		.02147	mg/L	107.4	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0012	0.0012			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.01		.01039	mg/L	103.9	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.01	U	.00906	mg/L	90.6	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.01	U	.00917	mg/L	91.7	70	130	1.21	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.01	U	.0099	mg/L	99	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.01	U	.01037	mg/L	103.7	70	130	4.64	20	
Arsenic, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05239	mg/L	104.8	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0015	0.0015			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.05006	mg/L	100	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05169	mg/L	103.3	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.05083	mg/L	101.6	70	130	1.68	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0024	.05657	mg/L	108.2	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0024	.0571	mg/L	109.3	70	130	0.93	20	
Beryllium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.04665	mg/L	93.3	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.0501		.04605	mg/L	91.9	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.0501	U	.04813	mg/L	96.1	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.0501	U	.04852	mg/L	96.8	70	130	0.81	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.0501	U	.04995	mg/L	99.7	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.0501	U	.05053	mg/L	100.9	70	130	1.15	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05066	mg/L	101.3	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.0501		.04878	mg/L	97.4	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.0501	U	.04846	mg/L	96.7	70	130			
	ASD	05/04/12 3:06	MS120430-3	.0501	U	.04858	mg/L	97	70	130	0.25	20	
L94173-01ASD				0 = 0 4				o= /	=0	400			
L94173-01ASD L94261-03AS L94261-03ASD	AS	05/04/12 3:51	MS120430-3 MS120430-3	.0501	U	.04779	mg/L	95.4	70	130			

Inorganic QC Summary

ACZ Project ID: L94261

Project ID:

ZS000001JL

Chromium, diss	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		1.974	mg/L	98.7	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.518	mg/L	103.6	85	115			
L94259-06AS	AS	05/01/12 20:16	ll120423-4	.5	U	.509	mg/L	101.8	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.514	mg/L	102.8	85	115	0.98	20	
Cobalt, dissolve	əd		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		2.019	mg/L	101	95	105			
WG321948ICB	ICB	05/01/12 19:14	11201000	-		U.010	mg/L	101	-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.518	mg/L	103.6	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.511	mg/L	102.2	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.516	mg/L	102.2	85	115	0.97	20	
		00/01/12 20:20			Ū.	.010					0.01	20	
Copper, dissolv		Anolymod	M200.7 IC		Comula	Found	Unite	Dee	Lower	llener		Linait	Qual
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		2.001	mg/L	100.1	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	ll120423-4	.5		.521	mg/L	104.2	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.523	mg/L	104.6	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.529	mg/L	105.8	85	115	1.14	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321941													
WG321941ICV	ICV	05/01/12 11:17	WC120426-	2.002		1.92	mg/L	95.9	95	105			
WG321941ICB	ICB	05/01/12 11:25				U	mg/L		-0.3	0.3			
WG321941LFB1	LFB	05/01/12 11:40	WC120124-	5		4.75	mg/L	95	90	110			
WG321941LFB2	LFB	05/01/12 15:25	WC120124-	5		4.64	mg/L	92.8	90	110			
L94257-05AS	AS	05/01/12 15:41	WC120124-	5	.2	4.93	mg/L	94.6	90	110			
L94257-05DUP	DUP	05/01/12 15:48		-	.2	.2	mg/L				0	20	RA
L94261-03AS	AS	05/01/12 17:42	WC120124-	5	.3	4.91	mg/L	92.2	90	110	•		
L94261-03DUP	DUP	05/01/12 17:49			.3	.26	mg/L				14.3	20	RA
Lead, dissolved			M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05324	mg/L	106.5	90	110			
WG322119ICB	ICB	05/04/12 2:53				.03324 U	mg/L	100.0	-0.0003	0.0003			
WG322119ICB	LFB	05/04/12 2:56	MS120430-3	.05005		.05059	mg/L	101.1	-0.0003	115			
L94173-01AS	AS	05/04/12 2:00	MS120430-3 MS120430-3	.05005	U	.05263	mg/L	101.1	70	130			
L94173-01AS	ASD	05/04/12 3:05		.05005	U	.05203	mg/L	105.2	70	130	0.38	20	
L94261-03AS	ASD	05/04/12 3:51	MS120430-3	.05005	.0008	.05243	mg/L	104.8	70 70	130	0.30	20	
L94261-03AS			MS120430-3 MS120430-3	.05005	.0008	.05293	•	104.2			0.38	20	
L34201-USASD	ASD	05/04/12 3:54	11/31/20430-3	.00005	.0008	.05273	mg/L	103.8	70	130	0.38	20	

Inorganic QC Summary

ACZ Project ID: L94261

Project ID:

ZS000001JL

Magnesium, dis	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	100		101.18	mg/L	101.2	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.6	0.6			
NG321948LFB	LFB	05/01/12 19:27	II120423-4	50.0051		53.55	mg/L	107.1	85	115			
_94259-06AS	AS	05/01/12 20:16	II120423-4	50.0051	36.4	88.62	mg/L	104.4	85	115			
_94259-06ASD	ASD	05/01/12 20:20	II120423-4	50.0051	36.4	89.87	mg/L	106.9	85	115	1.4	20	
Aolybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
NG321948													
VG321948ICV	ICV	05/01/12 19:08	II120430-3	2		2.044	mg/L	102.2	95	105			
NG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.533	mg/L	106.6	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.536	mg/L	107.2	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.539	mg/L	107.8	85	115	0.56	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
NG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05207	mg/L	104.1	90	110			
VG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0018	0.0018			
NG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.04983	mg/L	99.6	85	115			
_94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.04566	mg/L	91.2	70	130			
_94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.04523	mg/L	90.4	70	130	0.95	20	
_94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0012	.04556	mg/L	88.6	70	130			
_94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0012	.04637	mg/L	90.2	70	130	1.76	20	
Nitrate/Nitrite as	Ν		M353.2 - H	H2SO4 pre	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
NG322336													
VG322336ICV	ICV	05/08/12 22:27	WI120405-3	2.416		2.474	mg/L	102.4	90	110			
VG322336ICB	ICB	05/08/12 22:28				U	mg/L		-0.06	0.06			
NG322344													
NG322344LFB	LFB	05/09/12 0:01	WI120211-3	2		1.983	mg/L	99.2	90	110			
	AS	05/09/12 0:03	WI120211-3	2	.21	2.274	mg/L	103.2	90	110			
_94211-06AS		05/00/40 0:00			1.55	1.549	mg/L				0.1	20	
	DUP	05/09/12 0:06											
-94261-01DUP			SM2540C										
.94261-01DUP Residue, Filteral			SM2540C PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
.94211-06AS .94261-01DUP Residue, Filteral ACZ ID WG321833	ole (TDS) @180C		QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
.94261-01DUP Residue, Filteral ACZ ID WG321833	ble (TDS Type) @180C Analyzed		QC	Sample			Rec			RPD	Limit	Qual
_94261-01DUP Residue, Filteral ACZ ID	ole (TDS) @180C		QC 260	Sample	Found U 258	Units mg/L mg/L	Rec 99.2	Lower -20 80	Upper 20 120	RPD	Limit	Qual

Inorganic QC Summary

ACZ Project ID: L94261

Project ID:

ZS000001JL

Selenium, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05349	mg/L	107	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.04916	mg/L	98.2	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05047	mg/L	100.8	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.04977	mg/L	99.4	70	130	1.4	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0005	.0547	mg/L	108.3	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0005	.05178	mg/L	102.5	70	130	5.48	20	
Sulfate			D516-02 -	Turbidime	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322220													
WG322220ICB	ICB	05/07/12 10:26				U	mg/L		-3	3			
WG322220ICV	ICV	05/07/12 10:26	WI120423-8	20		18.8	mg/L	94	90	110			
WG322220LFB	LFB	05/07/12 10:37	WI111111-3	10.03		10.4	mg/L	103.7	90	110			
L94259-01DUP	DUP	05/07/12 11:11			176	173.6	mg/L				1.4	20	
L94259-02AS	AS	05/07/12 11:11	SO4TURB5	10	139	131.9	mg/L	-71	90	110			M3
WG322243													
WG322243ICB	ICB	05/07/12 10:26				U	mg/L		-3	3			
WG322243ICV	ICV	05/07/12 10:26	WI120423-8	20		18.8	mg/L	94	90	110			
WG322243LFB	LFB	05/07/12 13:31	WI111111-3	10.03		10.4	mg/L	103.7	90	110			
L94206-01DUP	DUP	05/07/12 13:31			6	5.5	mg/L				8.7	20	RA
L94206-02AS	AS	05/07/12 13:31	WI111111-3	10.03	10	20.1	mg/L	100.7	90	110			
L94263-01AS	AS	05/07/12 13:45	SO4TURB30	9.99	1040	1050	mg/L	100.1	90	110			
L94261-07DUP	DUP	05/07/12 13:50			2700	2740	mg/L				1.5	20	
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.0538	mg/L	107.6	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.05039	mg/L	100.7	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05245	mg/L	104.8	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.05277	mg/L	105.4	70	130	0.61	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	U	.05284	mg/L	105.6	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	U	.05195	mg/L	103.8	70	130	1.7	20	



(800) 334-5493

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94261-01	WG322220	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L94261-02	WG322220	Sulfate	D516-02 - Turbidimetric	М3	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.
L94261-03	WG322220	Sulfate	D516-02 - Turbidimetric	М3	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.
L94261-04	WG322243	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94261-05	WG322243	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L94261-06	WG322243	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L94261

No certification qualifiers associated with this analysis

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje	ct ID:		L94261
ZS000001JL	Date Rece	eived: 04	4/27/201	2 09:47
	Receive	ed By:		gac
	Date Pr	inted:	4/:	30/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х

- 12) Are samples requiring no headspace, headspace free?
- 13) Do the samples that require a Foreign Soils Permit have one?

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3162	4.7	15

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

Notes

Х

Х

FMI Gold & Copper - Sierrita

ZS000001JL

Sample Receipt

ACZ Project ID: L94261 Date Received: 04/27/2012 09:47 Received By: gac Date Printed: 4/30/2012

Sample Container Preservation

SAMPLE C	LIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID	
L94261-01 N	/H-14			Y		Y								-
L94261-02 N	Л-18			Y		Y								
L94261-03 N	MH-16W			Y		Y								
L94261-04 N	Л-16			Y		Y								
L94261-05 N	/IH-15W			Y		Y								
L94261-06 N	/IH-21			Y		Y								
L94261-07 N	/IH-22			Y		Y								
Sample Co	ntainer Preservation Leg	end												ļ
Abbreviation	Description	Contai	ner Typ	e Pr	eservati	ve/Limi	ts							Ī
R	Raw/Nitric	RED		рH	l must be	e < 2								
В	Filtered/Sulfuric	BLUE		pН	l must be	e < 2								
BK	Filtered/Nitric	BLACK		рH	l must be	e < 2								
G	Filtered/Nitric	GREEN	1	pН	l must be	e < 2								
0	Raw/Sulfuric	ORANO	ЭΕ	pН	l must be	e < 2								
Р	Raw/NaOH	PURPL	.E	pН	l must be	e > 12 *								
т	Raw/NaOH Zinc Acetate	TAN		pН	l must be	2 > 12								
Y	Raw/Sulfuric	YELLO	W	pН	l must be	e < 2								
YG	Raw/Sulfuric	YELLO	W GLAS	SS pH	l must be	e < 2								
N/A	No preservative needed	Not app	olicable											
RAD	Gamma/Beta dose rate	Not one	olicable		ust be < 2	050	hr							

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

AGZ Labo 2773 Downhill Drive Steamboat Sp Name: Jon Arco	oratories, Inc. rings, CO 80487 (800) 334-3 lerson		74 Addres	46 s: 60			val Me		
Company: Freenart - Mc.		L	Teleph		V a /ley 5 70 -	393	2 <u>850</u> -2714		
Name: Benjamin S. P Company: Clear Creek	laigneau t associates		E-mail Teleph		<u>едпеан</u>	@ de	ear weeks	ssaide	<u>, .co</u>
Name: Company:			Addres	SS:	. <u></u> .		`		
E-mail: If sample(s) received past holdin analysis before expiration, shall If 'NO' then ACZ will contact client for further instru- analyses, even if HT is expired, and data will be qua	ACZ proceed with requester action. If neither "YES" nor "NO" is indicated	t HT rem d short l	IT anal	comple yses?			YE N		
Are samples for SDWA Complian If yes, please include state forms	nce Monitoring?) PQL fo	Yes r Color		No] 		
Sampler's Name: Robert <u>Carp e</u>	Sampler's site Information	_	State	A2	Zip code		Time Zone		
Quote #:	1001JL		of Containers	terly					
Are any samples NRC licensal	ble material? Yes	s / No	# of C	Quar					
MH14	4/25/12	Gw	3	X					
M-18 MH-1601	4/25/12	GW GW	3	× ×		_			
M-16 MH-15W	4/25/12	Gw Gw		× ×					
MH-21 MH-22	4/24/12 4/24/12	Gu	<u>3</u> 3	×			╺ <mark>┥╴╶┽</mark> ╴	_ <u>+</u>	
Matrix SW (Surface Water) · G	W (Ground Water) WW (Waste	U Water) D)W (Drini	king Water	r) · SL (Sludg	∎) · SO (So	bil) · OL (Oil) ·	Other (Specif	y)
UPS Tracking H Benjamin J. Daig	noau @ clear cu	rowle i	455 C	6 G'A+1	es — J ^a			y Rop	.cot
	refer to ACZ's terms & cor				<u>4/27</u>		1	094	
They cg	7/26/	1014			<u> </u>				



FRMA	D050.	.02.17.1	0



Analytical Report

Jon Anderson FMI Gold & Copper - Sierrita P.O. Box 527 6200 West Duval Mine Road Green Valley, AZ 85622-0527

Cc: Ben Daigneau

Project ID: ZS000001ZS ACZ Project ID: L94380– SULFATE ONLY

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 04, 2012. This project was assigned to ACZ's project number, **L94380**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94380**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed and approved this report.





REPAD.01.11.00.01

May 18, 2012



Project ID:	ZS000001ZS
Sample ID:	MH-26-A

ACZ Sample ID: L94380-01 Date Sampled: 05/02/12 12:02 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry									
Parameter	EPA Method	Result	Qual >	(Q	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	9		*	mg/L	1	5	05/14/12 16:28	3 lhb



Project ID:	ZS000001ZS				
Sample ID:	MH-26-B				

ACZ Sample ID: L94380-02 Date Sampled: 05/01/12 15:17 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1680	*	mg/L	50	300	05/14/12 16:41	lhb



Project ID:	ZS000001ZS
Sample ID:	MH-25-A

ACZ Sample ID: L94380-03 Date Sampled: 05/01/12 11:23 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	13	*	mg/L	1	5	05/14/12 16:28	3 lhb



Project ID:	ZS000001ZS
Sample ID:	MH-26-C

ACZ Sample ID: L94380-04 Date Sampled: 05/01/12 14:28 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	820	*	mg/L	50	300	05/14/12 16:41	lhb



Project ID:	ZS000001ZS
Sample ID:	MH-25-B

ACZ Sample ID: L94380-05 Date Sampled: 05/01/12 12:08 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1690	*	mg/L	80	400	05/14/12 16:43	B lhb



Project ID:	ZS000001ZS
Sample ID:	MH-25-C

ACZ Sample ID: L94380-06 Date Sampled: 05/01/12 10:47 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1290	*	mg/L	50	300	05/14/12 16:44	lhb



Project ID:	ZS000001ZS
Sample ID:	DUP20120501A

ACZ Sample ID: L94380-07 Date Sampled: 05/01/12 00:00 Date Received: 05/04/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1750	*	mg/L	80	400	05/14/12 16:46	6 lhb



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

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

Inorganic QC Summary

Project ID:

ZS000001ZS

FMI Gold & Copper - Sierrita

Antimony, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.02		.02001	mg/L	100.1	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0012	0.0012			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.01		.01002	mg/L	100.2	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.01	U	.0105	mg/L	105	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.01	U	.01047	mg/L	104.7	70	130	0.29	20	
Arsenic, dissolv	ved		M200.8 IC	-									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05204	mg/L	104.1	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0015	0.0015			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.04946	mg/L	98.8	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0061	.06182	mg/L	111.3	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0061	.06407	mg/L	115.8	70	130	3.57	20	
Beryllium, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.04759	mg/L	95.2	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.0501		.04461	mg/L	89	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.0501	U	.05221	mg/L	104.2	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.0501	U	.0517	mg/L	103.2	70	130	0.98	20	
Cadmium, disso	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05155	mg/L	103.1	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.0501		.0491	mg/L	98	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.0501	U	.05225	mg/L	104.3	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.0501	U	.05253	mg/L	104.9	70	130	0.53	20	
Chromium, diss	solved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		1.956	mg/L	97.8	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.505	mg/L	101	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.51	mg/L	102	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.516	mg/L	103.2	85	115	1.17	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.499	mg/L	99.8	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.502	mg/L	100.4	85	115	0.6	20	

Inorganic QC Summary

ACZ Project ID: L94380

Project ID:

ZS000001ZS

Cobalt, dissolv	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		1.994	mg/L	99.7	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.513	mg/L	102.6	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.517	mg/L	103.4	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.515	mg/L	103	85	115	0.39	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.496	mg/L	99.2	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.504	mg/L	100.8	85	115	1.6	20	
Copper, dissolv	ved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		1.983	mg/L	99.2	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.516	mg/L	103.2	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.521	mg/L	104.2	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.525	mg/L	105	85	115	0.76	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.532	mg/L	106.4	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.535	mg/L	107	85	115	0.56	20	
Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322457													
WG322457ICV	ICV	05/10/12 14:33	WC120508-	2.002		1.9	mg/L	94.9	95	105			
WG322457ICB	ICB	05/10/12 14:41				U	mg/L		-0.3	0.3			
WG322457LFB1	LFB	05/10/12 15:02	WC120124-	5		4.6	mg/L	92	90	110			
L94178-01AS	AS	05/10/12 15:10	WC120124-	5	.8	5.08	mg/L	85.6	90	110			M2
L94178-01DUP	DUP	05/10/12 15:16			.8	.68	mg/L				16.2	20	RA
L94380-07AS	AS	05/10/12 16:24	WC120124-	5	.1	4.47	mg/L	87.4	90	110			M2
L94380-07DUP	DUP	05/10/12 16:27			.1	.16	mg/L				46.2	20	RA
WG322457LFB2	LFB	05/10/12 17:28	WC120124-	5		4.54	mg/L	90.8	90	110			
Lead, dissolved	1		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05264	mg/L	105.3	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.04996	mg/L	99.8	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0011	.05358	mg/L	104.9	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0011	.05287	mg/L	103.4	70	130	1.33	20	

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001ZS

Magnesium, dis	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	100		100.65	mg/L	100.7	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.6	0.6			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	50.007		51.37	mg/L	102.7	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	50.007	2.1	54.42	mg/L	104.6	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	50.007	2.1	54.56	mg/L	104.9	85	115	0.26	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	50.007	57.8	109.4	mg/L	103.2	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	50.007	57.8	110.6	mg/L	105.6	85	115	1.09	20	
Molybdenum, d	issolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		2.028	mg/L	101.4	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.519	mg/L	103.8	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.52	mg/L	104	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.52	mg/L	104	85	115	0	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.516	mg/L	103.2	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.515	mg/L	103	85	115	0.19	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05081	mg/L	101.6	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0018	0.0018			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.04796	mg/L	95.8	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0012	.04903	mg/L	95.6	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0012	.04928	mg/L	96.1	70	130	0.51	20	
Nitrate/Nitrite as	s N		M353.2 - I	H2SO4 pr	reserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322706													
WG322706ICV	ICV	05/15/12 22:18	WI120405-3	2.416		2.527	mg/L	104.6	90	110			
WG322706ICB	ICB	05/15/12 22:19				U	mg/L		-0.06	0.06			
WG322712													
WG322712LFB1	LFB	05/16/12 0:36	WI120211-3	2		1.962	mg/L	98.1	90	110			
L94380-01AS	AS	05/16/12 0:39	WI120211-3	2	1.09	3.127	mg/L	101.9	90	110			
L94380-02DUP	DUP	05/16/12 0:41			1.79	1.794	mg/L				0.2	20	
WG322712LFB2	LFB	05/16/12 1:10	WI120211-3	2		1.969	mg/L	98.5	90	110			
Residue, Filtera	Residue, Filterable (TDS) @180C												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322315													
WG322315PBW	PBW	05/08/12 14:30				U	mg/L		-20	20			
WG322315LCSW	LCSW	05/08/12 14:30	PCN39020	260		250	mg/L	96.2	80	120			
L94394-02DUP	DUP	05/08/12 14:44			240	246	mg/L				2.5	20	

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001ZS

Selenium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.0541	mg/L	108.2	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.05024	mg/L	100.4	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0005	.05836	mg/L	115.6	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0005	.05763	mg/L	114.1	70	130	1.26	20	
Sulfate D516-02 - Turbidimetric													
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322619													
WG322619ICB	ICB	05/14/12 15:14				U	mg/L		-3	3			
WG322619ICV	ICV	05/14/12 15:14	WI120508-3	20		19.5	mg/L	97.5	90	110			
WG322619LFB	LFB	05/14/12 16:25	WI120508-1	10		9.8	mg/L	98	90	110			
L94375-01DUP	DUP	05/14/12 16:27			26	26.5	mg/L				1.9	20	
L94380-01AS	AS	05/14/12 16:28	WI120508-1	10	9	11.4	mg/L	24	90	110			M2
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05309	mg/L	106.2	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.0492	mg/L	98.3	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	U	.05218	mg/L	104.3	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	U	.05178	mg/L	103.5	70	130	0.77	20	



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FMI Gold & Copper - Sierrita

94380-01	WG322457				
		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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
94380-02	WG322457	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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
94380-03	WG322457	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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
94380-04	WG322457	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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
94380-05	WG322457	Fluoride	SM4500F-C		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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
94380-06	WG322457	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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
94380-07	WG322357	Chromium, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
		Cobalt, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
		Copper, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
		Molybdenum, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG322457	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 sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.



ACZ Project ID: L94380

No certification qualifiers associated with this analysis

Sample Receipt

FMI Gold & Copper - Sierrita ZS000001ZS	ACZ Proje		L94380 5/04/2012 09:00		
200000120	Receive		5/04/20	ksj	
	Date Pr	•	F	5/7/2012	
Receipt Verification	Batori	intou			
		YES	NO	NA	
1) Does this project require special handling procedures such as CLP protocol?				Х	
2) Are the custody seals on the cooler intact?				Х	
3) Are the custody seals on the sample containers intact?				Х	
4) Is there a Chain of Custody or other directive shipping papers present?		Х			
5) Is the Chain of Custody complete?		Х			
6) Is the Chain of Custody in agreement with the samples received?		Х			
7) Is there enough sample for all requested analyses?		Х			
8) Are all samples within holding times for requested analyses?		Х			
9) Were all sample containers received intact?		Х		=	
10) Are the temperature blanks present?				Х	
11) Are the trip blanks (VOA and/or Cyanide) present?				Х	
12) Are samples requiring no headspace, headspace free?				Х	
13) Do the samples that require a Foreign Soils Permit have one?				Х	

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (℃)	Rad (µR/hr)
3049	5.9	15

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

Notes

FMI Gold & Copper - Sierrita

ZS000001ZS

Sample Receipt

ACZ Project ID:	L94380
Date Received:	05/04/2012 09:00
Received By:	ksj
Date Printed:	5/7/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	2 G < 2	2 BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94380-01	MH-26-A		Y		Y							
L94380-02	MH-26-B		Y		Y							
L94380-03	MH-25-A		Y		Y							
L94380-04	MH-26-C		Y		Y							
L94380-05	MH-25-B		Y		Y							
L94380-06	MH-25-C		Y		Y							
L94380-07	DUP20120501A		Y		Y							
Sample Co	ontainer Preservation Leg	end										
Abbreviation	n Description	Container Ty	pe P	reservativ	ve/Limi	ts						
R	Raw/Nitric	RED	pl	H must be	e < 2							
В	Filtered/Sulfuric	BLUE	pl	H must be	e < 2							
BK	Filtered/Nitric	BLACK	pl	H must be	e < 2							
G	Filtered/Nitric	GREEN	pl	H must be	e < 2							
0	Raw/Sulfuric	ORANGE	pl	H must be	e < 2							
Р	Raw/NaOH	PURPLE	pl	H must be	e > 12 *							
Т	Raw/NaOH Zinc Acetate	TAN	pl	H must be	e > 12							
Y	Raw/Sulfuric	YELLOW	pl	H must be	e < 2							
YG	Raw/Sulfuric	YELLOW GL	ASS pl	H must be	e < 2							
N/A	No preservative needed	Not applicable	e									

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

	2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493 Report Fol									
	Name: Jon Anderson Company: Freeport-McMoRan Sierrita Inc.			Addre	ss: 6200	W. Duval 1	Mine Road			
					Gree	n Valley, A	Z 85614	·		
	E-mail: jonathan_andersor			Telepi	none: 52	20-393-2714	1			
	Coav of Report to					· · · · · ·				
	Name: Ben Daigneau			E-mai	: bdaig	neau@cleare	reekassoci	ates.com		
	Company: Clear Creek A:	ssociates				20-622-3222				
	lavoice to			Addre	ee.					
	Name:		-	Addre				`		
	Company: E-mail:	-		Telepi	hone:					
		olding time (HT), or if insuffici	ient HT rem			te		YES		
a	analysis before expiration, :	shall ACZ proceed with reques	sted short	HT ana	lyses?			NO		
	If "NO" then ACZ will conta	ct client for further instruction ed with the requested analyse	i. If neithe	r "YES" ⊔Tie ov	nor "NC)" nd data will h	e qualified			
	is indicated, AC2 will proce Are samples for CO DW Col		S, even an		ipileu, a			YES		مسيرة فيسترز
		forms. Results will be reporte	d to PQL.					NO	×	
	PROJECT INFORMATIO				ANA: Ya	SES REQUES	11-D (attack	list or us	о днове пол	(m, 1)
ſ	Quote #:									
	Project/PO #: ZS000001Z9			of Containers	\geq					
	Reporting state for compliance testing:				<u> </u>					
	Sampler's Name: Robert Carper				<u> </u>		1			
ਬ [Are any samples NRC licensable material? Yes No			6 #	Quarterly					
<u>ي</u> ا	SAMPLE IDENTIFICAT	ION DATE: TIME	Matrix				↓↓			
3	MH-26-A	5/2/12 12:02	GW	3	×	_			├ ──-	
6	MH-26-B	5/1/12 15:17	GW	3	×		┼──┼──		┝╌╌┝╴	
	MH-25-A	5/1/12 11:23	GW	3	×				<u> </u>	
37. H	MH-26-C	5/1/12 14:28	GW	3	×		┥──┤──		╏──┤──	
	MH-25-B	5/1/12 12:08	GW	3	×		+ +			
\$	МН-25-С	5/1/12 10:47	GW	3	×		╉──┨╼		+	
ี ฏ	Dup 20120501A		GW	3	×		┼──╂─		┨──┦──	
			_ 				┼─┼─	=		
					$\left \right $		╉──┼─	_		
				<u> </u>				(Oil) . Other	(Specify)	
		r) · GW (Ground Water) · WW (Was	te Water) · D	W (Drink	ing Water)	· SL (Sludge) ·	SO (SOII) OL		(Specily)	
	REMARKS									
	Copy of report to Ben D	aigneau contains only "SO4	" results	with Q	C Sumn	nary.				
	UPS Tracking #1Z 867	/E4 23 1000 7885								
		Please refer to ACZ's terms	s & conditi	ons loc	ated on	the reverse	side of this	COC		
	· · · · · · · · · · · · · · · · · · ·									N 41
	RELINQUISHE		ETIME	,	R	ECEIVED B	Y:	_	DATE:11 0900	



Analytical Report

Jon Anderson FMI Gold & Copper - Sierrita P.O. Box 527 6200 West Duval Mine Road Green Valley, AZ 85622-0527

Cc: Ben Daigneau

Project ID: ZS000001Z9 ACZ Project ID: L94788– SULFATE ONLY

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 25, 2012. This project was assigned to ACZ's project number, **L94788**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94788**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed and approved this report.



REPAD.01.11.00.01





Project ID:	ZS000001Z9
Sample ID:	MH-29

ACZ Sample ID: L94788-01 Date Sampled: 05/21/12 10:36 Date Received: 05/25/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual X	ຊ Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/06/12 15:36	6 mpb



Project ID:	ZS000001Z9
Sample ID:	MH-28

ACZ Sample ID: L94788-02 Date Sampled: 05/21/12 11:50 Date Received: 05/25/12 Sample Matrix: Ground Water

Wet Chemistry								
Parameter	EPA Method	Result	Qual X	ຊ Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600	*	mg/L	100	500	06/06/12 15:36	6 mpb



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Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

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

В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
н	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 Refere	ences
(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, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).
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.

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

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

Inorganic QC Summary

ACZ Project ID: L94788

Project ID:

ZS000001Z9

Antimony, disse	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.02		.02066	mg/L	103.3	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0012	0.0012			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.01		.0111	mg/L	111	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.01	U	.01046	mg/L	104.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.01	U	.01054	mg/L	105.4	70	130	0.76	20	
Arsenic, dissolv	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05446	mg/L	108.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0015	0.0015			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05048	mg/L	100.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05534	mg/L	110.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05566	mg/L	111.2	70	130	0.58	20	
Beryllium, disse	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.04933	mg/L	98.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04993	mg/L	99.7	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05158	mg/L	103	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05224	mg/L	104.3	70	130	1.27	20	
Cadmium, diss	olved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05182	mg/L	103.6	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04963	mg/L	99.1	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05027	mg/L	100.3	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05154	mg/L	102.9	70	130	2.49	20	
Chromium, dise	solved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.956	mg/L	97.8	95	105			
	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539ICB			11120500.2	.5		.508	mg/L	101.6	85	115			
	LFB	05/30/12 22:42	11120509-2										
WG323539ICB WG323539LFB L94723-02AS	LFB AS	05/30/12 22:42 05/30/12 22:51	II120509-2 II120509-2	.5	U	.508	mg/L	101.6	85	115			

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG3235393 WG3235391CV ICV 05/30/12 22:24 II120430-3 2 1.997 mg/L 99.9 95 105 WG3235391CB ICB 05/30/12 22:24 II120509-2 .5 .504 mg/L 100.8 85 115 L94723-02ASD ASD 05/30/12 22:54 II120509-2 .5 U .506 mg/L 100.8 85 115 <th>Limit Qual 20 Limit Qual 20 Limit Qual</th> <th>1.19 RPD 0.39</th> <th>105 0.03 115 115 115 115 0.03 115 115 115</th> <th>95 -0.03 85 85 85 Lower 95 -0.03 85 85 85 85</th> <th>99.9 100.8 101.2 100 Rec 99.6 102 102.6 102.2</th> <th>mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L</th> <th>1.997 U .504 .506 .5 Found 1.992 U .51 .513 .511</th> <th>U U Sample</th> <th>2 .5 .5 .5 :P QC 2 .5 .5</th> <th>II120430-3 II120509-2 II120509-2 II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2</th> <th>05/30/12 22:24 05/30/12 22:30 05/30/12 22:42 05/30/12 22:51 05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:23</th> <th>ICV ICB LFB AS ASD red Type ICV ICB</th> <th>WG323539 WG323539ICV WG323539ICB WG323539LFB L94723-02AS L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV</th>	Limit Qual 20 Limit Qual 20 Limit Qual	1.19 RPD 0.39	105 0.03 115 115 115 115 0.03 115 115 115	95 -0.03 85 85 85 Lower 95 -0.03 85 85 85 85	99.9 100.8 101.2 100 Rec 99.6 102 102.6 102.2	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1.997 U .504 .506 .5 Found 1.992 U .51 .513 .511	U U Sample	2 .5 .5 .5 :P QC 2 .5 .5	II120430-3 II120509-2 II120509-2 II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2	05/30/12 22:24 05/30/12 22:30 05/30/12 22:42 05/30/12 22:51 05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:23	ICV ICB LFB AS ASD red Type ICV ICB	WG323539 WG323539ICV WG323539ICB WG323539LFB L94723-02AS L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV
WG323539ICV ICV 05/30/12 22:24 II120430-3 2 1.997 mg/L 99.9 95 105 WG323539ICB ICB 05/30/12 22:30 II120509-2 .5 .504 mg/L 100.8 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .506 mg/L 101.2 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .506 mg/L 101.2 85 115 1.19 Copper, dissolved M200.7 ICP M200.7 ICP M200.7 ICP Rec Lower Upper RPD WG3235391CV ICV 05/30/12 22:24 II120509-2 .5 U mg/L 99.6 95 105 WG3235391CV ICV 05/30/12 22:24 II120509-2 .5 U mg/L 102.6 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .511 mg/L 102.6	Limit Qual	RPD 0.39	0.03 115 115 115 Upper 105 0.03 115 115 115	-0.03 85 85 85 Lower 95 -0.03 85 85 85	100.8 101.2 100 Rec 99.6 102 102.6 102.2	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	U .504 .50 Found 1.992 U .51 .513 .511	U Sample U	.5 .5 :P QC 2 .5 .5	II120509-2 II120509-2 II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2	05/30/12 22:30 05/30/12 22:42 05/30/12 22:51 05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:23	ICB LFB AS ASD red Type ICV ICB	WG323539ICV WG323539ICB WG323539LFB L94723-02AS L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV
WG323539ICB ICB 05/30/12 22:30 U mg/L -0.03 0.03 WG323539LFB LFB 05/30/12 22:42 II120509-2 .5 .504 mg/L 100.8 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .506 mg/L 101.2 85 115 1.19 Copper, dissolvet M200.7 ICP M200.7 ICP V Smg/L 100 85 105 .003 .003 WG323539ICV ICV 05/30/12 22:24 II120430-3 2 1.992 mg/L 99.6 95 105 WG323539ICV ICV 05/30/12 22:30 U mg/L -0.03 0.03 WG323539ICB ICB 05/30/12 22:42 II120509-2 .5 .51 mg/L 102 85 115 L94723-02AS AS 05/30/12 22:41 II120509-2 .5 U .513 mg/L 102.6 85 115 L94723-02AS AS 05/30/12 22:41 II120509-2 .5 U .511 mg/L 102.2 8	Limit Qual	RPD 0.39	0.03 115 115 115 Upper 105 0.03 115 115 115	-0.03 85 85 85 Lower 95 -0.03 85 85 85	100.8 101.2 100 Rec 99.6 102 102.6 102.2	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	U .504 .50 Found 1.992 U .51 .513 .511	U Sample U	.5 .5 :P QC 2 .5 .5	II120509-2 II120509-2 II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2	05/30/12 22:30 05/30/12 22:42 05/30/12 22:51 05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:23	ICB LFB AS ASD red Type ICV ICB	WG323539ICB WG323539LFB L94723-02AS L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV
WG323539LFB LFB 05/30/12 22:42 II120509-2 .5 .504 mg/L 100.8 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .506 mg/L 101.2 85 115 1.19 Copper, dissolve M200.7 ICP M200 M300 M300 M300	Limit Qual	RPD 0.39	115 115 115 Upper 105 0.03 115 115 115	85 85 Lower 95 -0.03 85 85 85	101.2 100 Rec 99.6 102 102.6 102.2	mg/L mg/L mg/L Units Units mg/L mg/L mg/L mg/L	.504 .506 .5 Found 1.992 U .51 .513 .511	U Sample U	.5 .5 P QC 2 .5 .5	II120509-2 II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2	05/30/12 22:42 05/30/12 22:51 05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:30	LFB AS ASD red Type ICV ICB	WG323539LFB L94723-02AS L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV
L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .50 mg/L 101.2 85 115 L94723-02ASD ASD 05/30/12 22:54 II120509-2 .5 U .5 mg/L 100 85 115 1.19 Copper, dissolved M200.7 ICP M200.7 ICP Ker Lower Upper RPD WG323539 WG323539 V II20430-3 2 1.992 mg/L 99.6 95 105 WG323539ICV ICV 05/30/12 22:30 II120509-2 .5 U .511 mg/L 102.8 85 115 U4723-02AS AS 05/30/12 22:51 II120509-2 .5 U .513 mg/L 102.8 85 115 0.39 Fluoride SM4500F-C SM4500F-C U .513 mg/L 102.8 85 105 WG323683ICV ICV 06/01/12 11:45 WC120531- 2.002 1.92 mg/L 95.9 95	Limit Qual	RPD 0.39	115 115 Upper 105 0.03 115 115 115	85 85 Lower 95 -0.03 85 85 85	101.2 100 Rec 99.6 102 102.6 102.2	mg/L mg/L Units mg/L mg/L mg/L mg/L	.506 .5 Found 1.992 U .511 .513 .511	U Sample U	.5 .5 P QC 2 .5 .5	II120509-2 II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2	05/30/12 22:51 05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:30	AS ASD red Type ICV ICB	L94723-02AS L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV
L94723-02ASD ASD 05/30/12 22:54 II120509-2 .5 U .5 mg/L 100 85 115 1.19 Copper, dissolved M200.7 ICP M200.7 ICP M200.7 ICP Rec Lower Upper RPD WG323539 WG323539 WG323539 U mg/L 99.6 95 105 M200.7 ICP WG323539ICV ICV 05/30/12 22:24 II120430-3 2 1.992 mg/L 99.6 95 105 WG323539ICV ICV 05/30/12 22:30 II120509-2 .5 .51 mg/L 102 85 115 1.992 WG323539LFB LFB 05/30/12 22:51 II120509-2 .5 U .513 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C M4500F-C U .511 mg/L 102.8 85 105 .303 .33 .312 mg/L 95.9 95 105 WG323683ICV ICV 06/01/12 11:42 </td <td>Limit Qual</td> <td>RPD 0.39</td> <td>115 Upper 105 0.03 115 115 115</td> <td>85 Lower 95 -0.03 85 85 85 85</td> <td>100 Rec 99.6 102 102.6 102.2</td> <td>mg/L Units mg/L mg/L mg/L mg/L</td> <td>.5 Found 1.992 U .51 .513 .511</td> <td>U Sample U</td> <td>.5 P QC 2 .5 .5</td> <td>II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2</td> <td>05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:30</td> <td>ASD red Type ICV ICB</td> <td>L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV</td>	Limit Qual	RPD 0.39	115 Upper 105 0.03 115 115 115	85 Lower 95 -0.03 85 85 85 85	100 Rec 99.6 102 102.6 102.2	mg/L Units mg/L mg/L mg/L mg/L	.5 Found 1.992 U .51 .513 .511	U Sample U	.5 P QC 2 .5 .5	II120509-2 M200.7 IC PCN/SCN II120430-3 II120509-2	05/30/12 22:54 Analyzed 05/30/12 22:24 05/30/12 22:30	ASD red Type ICV ICB	L94723-02ASD Copper, dissolv ACZ ID WG323539 WG323539ICV
Copper, dissolved M200.7 ICP AC2 ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG3235391 WG3235391CV ICV 05/30/12 22:24 II120430-3 2 1.992 mg/L 99.6 95 105 WG3235391CV ICV 05/30/12 22:30 U mg/L -0.03 0.03 WG3235391CB ICB 05/30/12 22:42 II120509-2 .5 .51 mg/L 102.6 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .511 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C AC2 ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105	Limit Qual	RPD 0.39	Upper 105 0.03 115 115 115	95 -0.03 85 85 85	Rec 99.6 102 102.6 102.2	Units mg/L mg/L mg/L mg/L mg/L	Found 1.992 U .51 .513 .511	Sample	2 .5 .5	M200.7 IC PCN/SCN II120430-3 II120509-2	Analyzed 05/30/12 22:24 05/30/12 22:30	red Type ICV ICB	Copper, dissolv ACZ ID WG323539 WG323539ICV
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323539 WG323539 WG323539 II120430-3 2 1.992 mg/L 99.6 95 105 WG323539ICV ICV 05/30/12 22:24 II120509-2 .5 .51 mg/L 102 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .513 mg/L 102.6 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .511 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C SM4500F-C V .511 mg/L 102.2 85 105 0.33 3 WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 11:45 WC120531- 2.002	20	0.39	105 0.03 115 115 115	95 -0.03 85 85 85	99.6 102 102.6 102.2	mg/L mg/L mg/L mg/L mg/L	1.992 U .51 .513 .511	U	QC 2 .5 .5	PCN/SCN II120430-3 II120509-2	05/30/12 22:24 05/30/12 22:30	Type ICV ICB	ACZ ID WG323539 WG323539ICV
WG323539 WG323539 U 1.992 mg/L 99.6 95 105 WG323539ICV ICB 05/30/12 22:30 U mg/L -0.03 0.03 WG323539ICB ICB 05/30/12 22:30 U mg/L 102 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .513 mg/L 102.6 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .511 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C SM4500F-C .511 mg/L 95.9 95 105 WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323683ICV ICV 06/01/12 11:45 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002	20	0.39	105 0.03 115 115 115	95 -0.03 85 85 85	99.6 102 102.6 102.2	mg/L mg/L mg/L mg/L mg/L	1.992 U .51 .513 .511	U	2 .5 .5	II120430-3 II120509-2	05/30/12 22:24 05/30/12 22:30	ICV ICB	WG323539 WG323539ICV
WG323539ICV ICV 05/30/12 22:24 II120430-3 2 1.992 mg/L 99.6 95 105 WG323539ICB ICB 05/30/12 22:30 U mg/L 102 85 115 WG323539ICB LFB 05/30/12 22:42 II120509-2 .5 .51 mg/L 102 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .513 mg/L 102.6 85 115 L94723-02ASD ASD 05/30/12 22:54 II120509-2 .5 U .511 mg/L 102.2 85 115 0.39 Fluoride SM4500F-C SM4500F-C QC Sample Found Units Rec Lower Upper RPD WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- <			0.03 115 115 115	-0.03 85 85 85	102 102.6 102.2	mg/L mg/L mg/L mg/L	U .51 .513 .511		.5 .5	II120509-2	05/30/12 22:30	ICB	WG323539ICV
WG323539ICB ICB 05/30/12 22:30 U U mg/L -0.03 0.03 WG323539LFB LFB 05/30/12 22:42 II120509-2 .5 .51 mg/L 102. 85 115 L94723-02AS AS 05/30/12 22:54 II120509-2 .5 U .513 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C AC2 ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 11:45 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICP ICB 06/01/12 13:45 VC120124- 5 5.1 mg/L 95.9 95 105 WG323685ICP			0.03 115 115 115	-0.03 85 85 85	102 102.6 102.2	mg/L mg/L mg/L mg/L	U .51 .513 .511		.5 .5	II120509-2	05/30/12 22:30	ICB	
WG323539LFB LFB 05/30/12 22:42 II120509-2 .5 .51 mg/L 102 85 115 L94723-02AS AS 05/30/12 22:51 II120509-2 .5 U .513 mg/L 102.6 85 115 L94723-02AS ASD 05/30/12 22:54 II120509-2 .5 U .511 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C SM4500F-C V .511 mg/L 102.1 85 105 0.39 WG323683 VG Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683 ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICB ICB <th< td=""><td></td><td></td><td>115 115 115</td><td>85 85 85</td><td>102.6 102.2</td><td>mg/L mg/L mg/L</td><td>.51 .513 .511</td><td></td><td>.5</td><td></td><td></td><td></td><td>WG323539ICB</td></th<>			115 115 115	85 85 85	102.6 102.2	mg/L mg/L mg/L	.51 .513 .511		.5				WG323539ICB
L94723-02AS L94723-02ASD AS 05/30/12 22:51 II120509-2 .5 U .513 mg/L 102.6 85 115 0.39 Fluoride SM4500F-C ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683 ICB 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICB ICB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90			115 115	85 85	102.6 102.2	mg/L mg/L	.513 .511		.5		05/30/12 22:42	LFB	
L94723-02ASD ASD 05/30/12 22:54 II120509-2 .5 U .511 mg/L 102.2 85 115 0.39 Fluoride SM4500F-C ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683 WG323683ICP ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323683ICP ICB 06/01/12 11:45 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:48 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:48 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICP ICV 06/01/12 13:49 WC120124- 5 5.1 mg/L 95.9 95 105 WG323685ICB ICB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 <th< td=""><td></td><td></td><td>115</td><td>85</td><td>102.2</td><td>mg/L</td><td>.511</td><td></td><td></td><td>1120509-2</td><td></td><td></td><td>WG323539LFB</td></th<>			115	85	102.2	mg/L	.511			1120509-2			WG323539LFB
Fluoride SM4500F-C ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683 WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323683ICV ICV 06/01/12 11:45 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICB ICB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 U94787-14AS AS 06/01/12 14:51 WC120124						_		U	5	1120000 2	05/30/12 22:51	AS	L94723-02AS
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD WG323683 WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323683ICB ICB 06/01/12 11:45 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICB ICB 06/01/12 13:45 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:42 U mg/L -0.3 0.3 WG323685ICB ICB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 90 110 <td>Limit Qual</td> <td>RPD</td> <td>Upper</td> <td>Lower</td> <td>Rec</td> <td>Units</td> <td></td> <td></td> <td>.5</td> <td>II120509-2</td> <td>05/30/12 22:54</td> <td>ASD</td> <td>L94723-02ASD</td>	Limit Qual	RPD	Upper	Lower	Rec	Units			.5	II120509-2	05/30/12 22:54	ASD	L94723-02ASD
WG323683 WG323683ICV ICV 06/01/12 11:42 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323683ICB ICB 06/01/12 11:45 U mg/L -0.3 0.3 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L -0.3 0.3 WG323685ICB ICB 06/01/12 13:42 U mg/L 95.9 95 105 WG323685IFB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 96.4 90 110	Limit Qual	RPD	Upper	Lower	Rec	Units			·C	SM4500F-			Fluoride
WG323683ICV WG323683ICB ICV ICB 06/01/12 11:42 06/01/12 11:45 WC120531- PC120531- 2.002 1.92 U mg/L 95.9 mg/L 95 -0.3 105 0.3 WG323683ICB ICV ICB 06/01/12 11:45 WC120531- VC120531- 2.002 1.92 U mg/L 95.9 P5.9 95 0.3 105 0.3 WG323685ICV ICV ICB 06/01/12 13:38 06/01/12 13:42 WC120531- PC120124- 2.002 1.92 PC mg/L 95.9 P5.9 95 P5 105 PC WG323685ICB ICB ICB 06/01/12 13:49 PC120124- VC120124- 5 1.92 PC mg/L 95.9 P5.9 95 P5 105 PC WG323685ICB ICB ICB PG/01/12 13:49 WC120124- 5 5.1 PC mg/L 102 PG 90 110 UP4787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 96.4 90 110							Found	Sample	QC	PCN/SCN	Analyzed	Туре	ACZ ID
WG323683ICB ICB 06/01/12 11:45 U mg/L -0.3 0.3 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:32 WC120531- 2.002 1.92 mg/L 9.5.9 95 105 WG323685ICB ICB 06/01/12 13:42 U mg/L -0.3 0.3 WG323685IFB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 96.4 90 110													WG323683
WG323683ICB ICB 06/01/12 11:45 U mg/L -0.3 0.3 WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICV ICV 06/01/12 13:42 U mg/L -0.3 0.3 WG323685ICB ICB 06/01/12 13:42 U 1.92 mg/L 95.9 95 105 WG323685ICB ICB 06/01/12 13:42 U mg/L 90.3 0.3 WG323685IFB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 96.4 90 110			105	95	95.9	ma/L	1.92		2.002	WC120531-	06/01/12 11:42	ICV	WG323683ICV
WG323685ICV ICV 06/01/12 13:38 WC120531- 2.002 1.92 mg/L 95.9 95 105 WG323685ICB ICB 06/01/12 13:42 U mg/L -0.3 0.3 WG323685LFB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 90 110			0.3	-0.3		-	U				06/01/12 11:45	ICB	WG323683ICB
WG323685ICB ICB 06/01/12 13:42 U mg/L -0.3 0.3 WG323685ICB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 90 110													WG323685
WG323685ICB ICB 06/01/12 13:42 U mg/L -0.3 0.3 WG323685ICB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 90 110			105	95	95.9	ma/L	1.92		2.002	WC120531-	06/01/12 13:38	ICV	WG323685ICV
WG323685LFB1 LFB 06/01/12 13:49 WC120124- 5 5.1 mg/L 102 90 110 L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 90 110						-							
L94787-14AS AS 06/01/12 14:51 WC120124- 5 .3 5.12 mg/L 96.4 90 110					102	-			5	WC120124-			
L94787-14DUP DUP 06/01/12 14:54 .3 .34 mg/L 12.5			110	90	96.4	-	5.12	.3		WC120124-	06/01/12 14:51	AS	L94787-14AS
	20 F	12.5					.34				06/01/12 14:54	DUP	L94787-14DUP
WG323685LFB2 LFB 06/01/12 15:37 WC120124- 5 5.05 mg/L 101 90 110			110	90	101	-	5.05		5	WC120124-	06/01/12 15:37	LFB	WG323685LFB2
Lead, dissolved M200.8 ICP-MS									P-MS	M200.8 IC			Lead, dissolved
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD	Limit Qual	RPD	Upper	Lower	Rec	Units	Found	Sample	QC	PCN/SCN	Analyzed	Туре	ACZ ID
WG323661													WG323661
WG323661ICV ICV 06/01/12 4:59 MS120416-2 .05 .05212 mg/L 104.2 90 110			110	90	104.2	ma/L	.05212		.05	MS120416-2	06/01/12 4:59	ICV	WG323661ICV
WG323661ICB ICB 06/01/12 5:02 U mg/L -0.0003 0.0003					=								
WG323661LFB LFB 06/01/12 5:05 MS120531-3 .05005 .049 mg/L 97.9 85 115					97.9	-			.05005	MS120531-3			
L94642-01AS AS 06/01/12 5:12 MS120531-3 .05005 U .04961 mg/L 99.1 70 130						-		U					
L94642-01ASD ASD 06/01/12 5:14 MS120531-3 .05005 U .05057 mg/L 101 70 130 1.92	20					-							
Magnesium, dissolved M200.7 ICP		1.92	130	70	101		.00001	U	.05005	MS120531-3	06/01/12 5:14		

ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	100		101.38	mg/L	101.4	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.6	0.6			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	50.007		51.69	mg/L	103.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	50.007	.7	53.03	mg/L	104.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	50.007	.7	52.55	mg/L	103.7	85	115	0.91	20	

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Molybdenum, di	ssolved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		2.018	mg/L	100.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.522	mg/L	104.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.527	mg/L	105.4	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.52	mg/L	104	85	115	1.34	20	
Nickel, dissolve	d		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05174	mg/L	103.5	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0018	0.0018			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04696	mg/L	93.8	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04713	mg/L	94.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.04739	mg/L	94.7	70	130	0.55	20	
Nitrate/Nitrite as	Ν		M353.2 - I	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323865													
WG323865ICV	ICV	06/05/12 22:33	WI120405-3	2.416		2.379	mg/L	98.5	90	110			
WG323865ICB	ICB	06/05/12 22:34				U	mg/L		-0.06	0.06			
WG323867													
WG323867LFB	LFB	06/05/12 23:39	WI120211-3	2		2.033	mg/L	101.7	90	110			
L94788-01AS	AS	06/05/12 23:41	WI120211-3	2	.38	2.454	mg/L	103.7	90	110			
L94788-02DUP	DUP	06/05/12 23:44			1.04	1.04	mg/L				0	20	
Residue, Filteral	ole (TDS) @180C	SM2540C										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323390													
WG323390PBW	PBW	05/25/12 15:15				U	mg/L		-20	20			
WG323390LCSW	LCSW	05/25/12 15:15	PCN39024	260		258	mg/L	99.2	80	120			
L94797-03DUP	DUP	05/25/12 15:29			970	970	mg/L				0	20	
Selenium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05147	mg/L	102.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04555	mg/L	91	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	.0005	.05265	mg/L	104.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	.0005	.05374	mg/L	106.4	70	130	2.05	20	

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID:

ZS000001Z9

Sulfate			D516-02 -	Turbidime	etric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323927													
WG323927ICB	ICB	06/06/12 14:52				U	mg/L		-3	3			
WG323927ICV	ICV	06/06/12 14:52	WI120523-4	20		20.9	mg/L	104.5	90	110			
WG323927LFB	LFB	06/06/12 15:13	WI120508-1	10		9.8	mg/L	98	90	110			
L94788-01DUP	DUP	06/06/12 15:36			1600	1640	mg/L				2.5	20	
L94788-02AS	AS	06/06/12 15:36	SO4TURB10	10	1600	1880	mg/L	2800	90	110			M
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05387	mg/L	107.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05013	mg/L	100.2	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05096	mg/L	101.8	70	130			
	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05199		103.9	70	130	2	20	



(800) 334-5493

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94788-01	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323927	Sulfate	D516-02 - Turbidimetric	М3	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.
L94788-02	WG323685	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG323927	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.



ACZ Project ID: L94788

No certification qualifiers associated with this analysis

Sample Receipt

FMI Gold & Copper - Sierrita	ACZ Proje	ect ID:		L94788
ZS000001Z9	Date Rec	eived: 0	5/25/201	2 09:11
	Receive	ed By:		ksj
	Date Pr	rinted:	5/2	25/2012
Receipt Verification				
		YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?				Х
2) Are the custody seals on the cooler intact?		Х		
3) Are the custody seals on the sample containers intact?				Х
4) Is there a Chain of Custody or other directive shipping papers present?		Х		
5) Is the Chain of Custody complete?		Х		
6) Is the Chain of Custody in agreement with the samples received?		Х		
7) Is there enough sample for all requested analyses?		Х		
8) Are all samples within holding times for requested analyses?		Х		
9) Were all sample containers received intact?		Х		
10) Are the temperature blanks present?				Х
11) Are the trip blanks (VOA and/or Cyanide) present?				Х
12) Are samples requiring no headspace, headspace free?				Х
13) Do the samples that require a Foreign Soils Permit have one?				Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Temp (℃) Rad (µR/hr)
2.3	15

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

Notes

FMI Gold & Copper - Sierrita

ZS000001Z9

Sample Receipt

ACZ Project ID:	L94788
Date Received:	05/25/2012 09:11
Received By:	ksj
Date Printed:	5/25/2012

Sample Container Preservation

SAMPLE	CLIENT ID		R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L94788-01	MH-29			Y		Y			1				
L94788-02	MH-28			Y		Y							
Sample C	ontainer Preservation Leg	end											
Abbreviatio	n Description	Contai	ner Typ	e Pr	eservativ	/e/Limi	ts						
R	Raw/Nitric	RED		p⊢	l must be	< 2							
В	Filtered/Sulfuric	BLUE		p⊦	l must be	< 2							
BK	Filtered/Nitric	BLACK	ζ.	p⊦	l must be	< 2							
G	Filtered/Nitric	GREE	N	p⊦	l must be	< 2							
0	Raw/Sulfuric	ORAN	GE	p⊦	l must be	< 2							
Р	Raw/NaOH	PURPL	.E	p⊦	l must be	> 12 *							
Т	Raw/NaOH Zinc Acetate	TAN		p⊦	l must be	> 12							
Y	Raw/Sulfuric	YELLO	W	p⊦	l must be	< 2							
YG	Raw/Sulfuric	YELLO	W GLA	SS p⊢	l must be	< 2							
N/A	No preservative needed	Not app	olicable										
RAD	Gamma/Beta dose rate	Not app	olicable	m	ust be < 2	250 µR/l	hr						

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

Name: Jon Anderson			Addre	ss: 620	0 W. I	Duval Min	e Road			
Company: Freeport-N	IcMoRan Sierrita Inc.			Gre	en Va	lley, AZ 85	5614			
E-mail: jonathan_ande	erson@fmi.com		Telept	none: 5	20-39	3-2714				
Copy of Report Io:					·					
Name: Ben Daigneau			E-mail	: bdaig	neau@	0,clearcreel	kassocia	tes.com		
Company: Clear Cree			Telepi	none: 5	20-62	2-3222				
Invorce to:										
Name:			Addre	SS:						
Company:										
E-mail:			Telepi	none:						
	ast holding time (HT), or if insuffic				ete			YES	$ \square]$	
	ion, shall ACZ proceed with reque ontact client for further instructior				0 "			NO		
	roceed with the requested analyse					a will be qu	alified.			
Are samples for CO DV	Compliance Monitoring?							YES		
	tate forms. Results will be reporte	d to PQL.		6 NI & L XI				NO	×	
PROJECT INFORMA	TION			A SALY	or o K	EQUESTED	ganaco.	nsi or us	е цасесь 1 — П	301672 °
Quote #:		_	5							
Project/PO #: ZS000			of Containers	Ŀ						
Reporting state for co	mpliance testing:	_	onta	e						
Sampler's Name:		_	5	ar a						
SAMPLE IDENTIFIC	Clicensable material? Yes No DATION DATE: HML	Matrix	#	Quarterly						
MH-29	05/21/12 : 10:36	GW	3	×						
MH-28	05/21/12:1150	GW	3	×						
5										
}		_							┝	
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·							_		┨┈─┥	
		_							┝	<u>~</u>
			<u> </u>						+	
	Water) · GW (Ground Water) · WW (Wast		Al (Deinki			(udgo) - 60 /6			(Specify)	
	water) · Gw (Ground water) · www (was	le water) . Di		ng water)• 32 (3	100gə) - 30 (a	1011) - OL (1		(Specity)	
REMARKS	<u> </u>									
Copy of report to Be	n Daigneau contains only "SO4	" results v	vith QC	C Sumr	nary.					
LIPS Tracking # 1	2867 7E4	n 2	17	$\gamma \wedge \ell$	i	x/199	7			
		a 5	16		,	001				
		_								
	Please refer to ACZ's terms	& condition	ons loca	ated on	the re	verse side	of this C	:OC.		

White - Return with sample. Yellow - Retain for your records.