FREEPORT-McMoRan
COPPER & GOLD

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

April 26, 2012

Via Certified Mail # 7011 1150 0000 0283 7020
Return Receipt Requested

Ms. Mindy 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 Fourth Quarter 2011 and First Quarter 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 the Fourth Quarter 2011 and First Quarter 2012, prepared by Clear Creek Associates for Freeport-McMoRan Sierrita Inc. (Sierrita). This document provides results of groundwater monitoring conducted during the fourth quarter of 2011 and the first quarter 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) 393-2696 if you have any question regarding this submittal.

Sincerely,

Martha G. Mottley
Chief Environmental Engineer
Freeport-McMoRan Sierrita Inc.

MGM/ms
Attachment
20120425_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 FOURTH QUARTER 2011 AND FIRST QUARTER 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

April 23, 2012

SEMIANNUAL GROUNDWATER MONITORING REPORT FOR SAMPLES COLLECTED DURING THE FOURTH QUARTER 2011 AND FIRST QUARTER 2012

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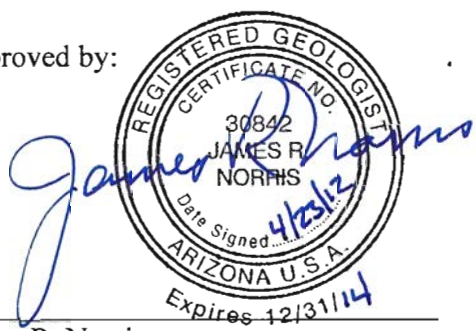
FREEPORT-MCMORAN SIERRITA INC.
6200 West Duval Mine Road
Green Valley, Arizona 85614

Approved by:



James R. Norris
Arizona Registered Geologist No. 30842

April 23, 2012

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted in the fourth quarter 2011 and first quarter 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. Initially, the locations and frequency of groundwater sampling were specified by the Work Plan (Hydro Geo Chem, Inc. [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 (sample locations and frequency) 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 program 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 fourth quarter 2011 and first quarter 2012 are tabulated in Table 2 and Table 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the fourth quarter 2011. 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 first quarter 2012. The highest sulfate concentration measured at co-located wells was used for concentration contouring[1]. Groundwater elevations in the fourth quarter 2011 and first quarter 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.

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 fourth quarter 2011 and first quarter 2012, and is included as Appendix A. Analytical laboratory reports for samples collected in fourth quarter 2011 and first quarter 2012 are provided in portable document format on the compact diskette in Appendix B. As determined by the analytical data verification review, the data are of acceptable quality for use in the groundwater monitoring program conducted pursuant to the Mitigation Order.

[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 distance of 900 feet 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 399 feet per year determined using an average hydraulic gradient of 0.00882 between MO-2007-1C and TMM-1, a hydraulic conductivity of 31 feet per day, and an assumed 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.

3. FINDINGS

This semiannual data report provides the results of groundwater monitoring conducted in the vicinity of the STI for the fourth quarter 2011 and first quarter 2012 (Table 1). Groundwater samples and, if possible, depth to water measurements were collected from 28 plume area wells during the fourth quarter 2011. In the first quarter 2012 groundwater samples and, if possible, 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 well ESP-4 which was not sampled in the fourth quarter 2011 due to mechanical problems with the pump.

- 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 extends northward from wells CW-3/MO-2007-5 to north of the MO-2007-1 wells (Figures 2 and 3). Comparison of the fourth quarter 2011 and first quarter 2012 sulfate concentration data with those collected in previous quarters does not indicate any significant change to the plume geometry, although there has been downgradient movement at the north end of the plume as discussed below.
- 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, GV-01-GVDWID, and GV-02-GVDWID indicate that sulfate concentrations are less than the interim action trigger level of 135 mg/L (HGC, 2006b) and steady or declining over time (i.e. GV-02-GVDWID).
    - Time series graphs for sentinel wells MO-2007-3B, MO-2007-4A, MO-2007-4B, MO-2007-6A, and MO-2009-1 indicate that sulfate concentrations are steady over time and below 135 mg/L, which is the trigger level for more frequent monitoring at sentinel wells (Sierrita, 2009a). Sulfate concentrations at sentinel wells MO-2007-3C and MO-2007-6B are below 135 mg/L and decrease slightly over time whereas concentrations at MO-2007-4C and NP-2 increase slightly.
    - Time series graphs for wells along the edge of the plume indicate sulfate concentrations are relatively steady or decline over time except at MO-2007-1B, MO-2007-1C, and ESP-1. Sulfate concentrations increased at MO-2007-1B and MO-2007-1C which are positioned at the leading 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. Sulfate concentrations at ESP-1 have increased since 2008.

- 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.

Sierrita. 2012. Letter from Martha Mottley (Sierrita) to Mindi Cross (ADEQ) Regarding Mitigation Order on Consent, Docket P-50-06, ADEQ Letter of February 12, 2012 Regarding Groundwater Monitoring Report for Second and Third Quarters of 2011. March 16, 2012.

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	✓		✓	
CW-6	627485	CWC	✓	✓	✓	✓
CW-7	502546	CWC	WLO			
CW-8	543600	CWC	WLO			
CW-9	588121	CWC	✓	✓	✓	✓
CW-10	207982	CWC	✓	✓	✓	✓
ESP-1	623102	Sierrita	✓		✓	
ESP-2	623103	Sierrita	✓		✓	
ESP-3	623104	Sierrita	✓		✓	
ESP-4	623105	Sierrita	✓		✓	
ESP-5	623106	Sierrita	WLO			
GV-01-GVDWID	603428	GVDWID	✓	✓	✓	✓
GV-02-GVDWID	603429	GVDWID	✓	✓	✓	✓
GV-SI-GVDWID	208825	GVDWID	✓			
HAVEN GOLF	515867	Haven Golf	✓			
I-10	608525	TBPI	✓			
IW-1	623129	Sierrita	✓			
IW-2A	216464	Sierrita	✓			
IW-3A	623131	Sierrita	✓			
IW-4	623132	Sierrita	✓			
IW-5A	623133	Sierrita	✓			
IW-6A	545565	Sierrita	✓			
IW-8	508236	Sierrita	✓			
IW-9	508238	Sierrita	✓			
IW-10	508237	Sierrita	✓			
IW-11	508235	Sierrita	✓			
IW-12	545555	Sierrita	✓			
IW-13	545556	Sierrita	✓			
IW-14	545557	Sierrita	✓			
IW-15	545558	Sierrita	✓			
IW-16	545559	Sierrita	WLO			
IW-17	545560	Sierrita	WLO			
IW-18	545561	Sierrita	WLO			
IW-19	545562	Sierrita	✓			
IW-20	545563	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
IW-21	545564	Sierrita	✓			
IW-22	200554	Sierrita	✓			
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	✓	✓	✓	✓
MO-2007-4B[2]	907212	Sierrita	✓	✓	✓	✓
MO-2007-4C[2]	907211	Sierrita	✓	✓	✓	✓
MO-2007-5B	907456	Sierrita	✓		✓	
MO-2007-5C	907457	Sierrita	✓		✓	
MO-2007-6A[3]	907607	Sierrita	✓	✓	✓	✓
MO-2007-6B[3]	907606	Sierrita	✓	✓	✓	✓
MO-2009-1[4]	910458	Sierrita	✓	✓	✓	✓
NP-2[1]	605898	CWC	✓	✓	✓	✓
PZ-7	561870	Sierrita	✓			
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 Fourth Quarter 2011 and First Quarter 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
CW-3	627483	12/5/11	7.79	22.7	437	55.18
CW-6	627485	12/14/11	7.76	23.7	429	54.50
		12/14/11 DUP	7.76	23.7	429	54.42
		1/24/12	7.49	25.2	303	60.17
CW-9	588121	12/14/11	7.69	26.5	373	43.80
		1/24/12	7.70	25.1	262	45.60
CW-10	207982	12/14/11	7.81	29.8	370	49.24
		1/24/12	7.77	28.7	265	52.32
ESP-1	623102	12/13/11	7.49	26.1	1046	387.52
ESP-2	623103	11/22/11	7.84	26.0	350	26.65
ESP-3	623104	11/22/11	7.95	27.6	337	34.18
GV-01-GVDWID	603428	12/7/11	7.68	25.4	416	39.31
		3/14/12	7.61	26.0	406	35.56
GV-02-GVDWID	603429	12/7/11	7.53	21.8	578	77.88
		3/14/12	7.37	23.8	566	77.35
M-8	087390	11/17/11	7.88	23.6	522	84.577
M-10	501653	11/16/11	8.04	27.6	612	162
MH-28	903548	10/4/11	7.12	25.8	1390	1800
MH-29	903649	10/4/11	6.91	25.3	1765	1600
MO-2007-1A	907342	10/6/11	7.79	23.4	371	16.143
MO-2007-1B	907210	10/6/11	7.84	24.8	1178	604.67
		10/6/11 DUP	7.84	24.8	1178	614.84
MO-2007-1C	907209	10/6/11	8.10	25.9	942	393.94
MO-2007-3B	906816	10/5/11	8.04	25.7	395	37.822
		11/22/11	8.00	26.1	286	36.7
		1/11/12	7.55	27.0	211	39.00
MO-2007-3C	906817	10/5/11	8.28	29.3	524	96.818
		1/11/12	7.92	29.4	283	104.03
MO-2007-4A	907213	10/5/11	7.82	24.1	435	34.47
		1/17/12	7.54	24.5	274	37.55
MO-2007-4B	907212	10/5/11	8.01	27.6	401	34.194
		10/5/2011 DUP	8.01	27.6	401	33.36
		1/17/12	7.81	26.7	259	33.14
MO-2007-4C	907211	10/5/11	8.43	30.0	505	89.355
		1/12/12	8.52	29.5	329	92.92
MO-2007-5B	907456	11/21/11	7.98	27.2	1249	494.3
MO-2007-5C	907457	11/21/11	8.58	26.4	780	235.98
MO-2007-6A	907607	10/6/11	8.05	25.8	402	34.109
		1/11/12	7.47	26.8	234	43.51
		1/11/12 DUP	7.47	26.8	234	42.97
MO-2007-6B	907606	10/6/11	8.08	27.0	405	55.342
		1/11/12	7.57	29.9	235	57.78
MO-2009-1	910458	12/1/11	8.57	28.9	479	91.82
		1/11/12	8.18	29.9	292	93.84

TABLE 2
Analytical Results for Fourth Quarter 2011 and First Quarter 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
NP-2	605898	12/5/11	8.11	23.1	396	58.63
		3/21/12	7.86	24.9	337	64.11
TMM-1	616156	12/21/11	7.10	20.4	1580	<0.5

Notes:
ADWR = Arizona Department of Water Resources
SU = Standard Units
deg C = degrees Celsius
µS/cm = microsiemens per centimeter
mg/L = milligrams per Liter
DUP = Duplicate sample

TABLE 3
Groundwater Elevation Data for Fourth Quarter 2011 and First Quarter 2012

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)
CW-3	627483	HGC	3523809.985	500047.663	2941.71	12/5/11	274.20	2667.51
CW-6	627485	CWC	3525794.239	500891.072	2867.00	12/14/11	253.57	2613.43
						1/24/12	252.33	2614.67
CW-9	588121	CWC	3528740.784	501072.040	2834.30	12/14/11	314.17	2520.13
						1/24/12	312.56	2521.74
CW-10	207982	CWC	3523455.502	500913.364	2868.50	12/14/11	191.70	2676.80
						1/24/12	189.73	2678.77
ESP-1	623102	Sierrita	3526448.677	499969.682	2953.43	11/22/11	357.82	2595.61
						12/13/11	355.60	2597.83
ESP-2	623103	Sierrita	3526924.656	500241.637	2934.60	11/22/11	347.26	2587.34
ESP-3	623104	Sierrita	3527377.239	500234.067	2935.80	11/22/11	364.91	2570.89
ESP-4	623105	Sierrita	3526132.758	499916.830	2958.60	11/22/11	356.91	2601.69
GV-01-GVDWID	603428	GVDWID	3522254.157	499812.869	2942.35	12/7/11	233.20	2709.15
						3/14/12	234.25	2708.10
GV-02-GVDWID	603429	GVDWID	3521654.457	499786.207	2930.47	12/7/11	204.43	2726.04
						3/14/12	204.35	2726.12
M-8	87390	Sierrita	3529692.237	499658.916	2999.53	11/17/11	471.23	2528.30
M-10	501653	Sierrita	3530143.114	499659.027	3005.68	11/16/11	484.66	2521.02
MH-28	903548	Sierrita	3524609.980	497471.427	3142.18	10/4/11	397.90	2744.28
MH-29	903649	Sierrita	3522805.518	497604.326	3123.15	10/4/11	380.25	2742.90
MO-2007-1A	907342	Sierrita	3529331.380	500016.947	2967.65	10/6/11	433.60	2534.05
MO-2007-1B	907210	Sierrita	3529325.119	500021.574	2966.82	10/6/11	434.10	2532.72
MO-2007-1C	907209	Sierrita	3529328.959	500013.405	2968.58	10/6/11	431.80	2536.78
MO-2007-3B	906816	Sierrita	3528508.801	500522.491	2912.15	11/22/11	365.10	2547.05
						1/11/12	363.36	2548.79
MO-2007-3C	906817	Sierrita	3528508.743	500529.713	2911.90	10/5/11	365.50	2546.40
						1/11/12	363.36	2548.54
MO-2007-4A	907213	Sierrita	3525634.956	500383.682	2923.63	10/5/11	312.50	2611.13
						1/17/12	310.05	2613.58
MO-2007-4B	907212	Sierrita	3525613.952	500380.947	2923.57	10/5/11	313.50	2610.07
						1/17/12	309.81	2613.76
MO-2007-4C	907211	Sierrita	3525624.484	500382.217	2923.66	10/5/11	314.80	2608.86
						1/12/12	311.00	2612.66
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	11/21/11	273.28	2671.07

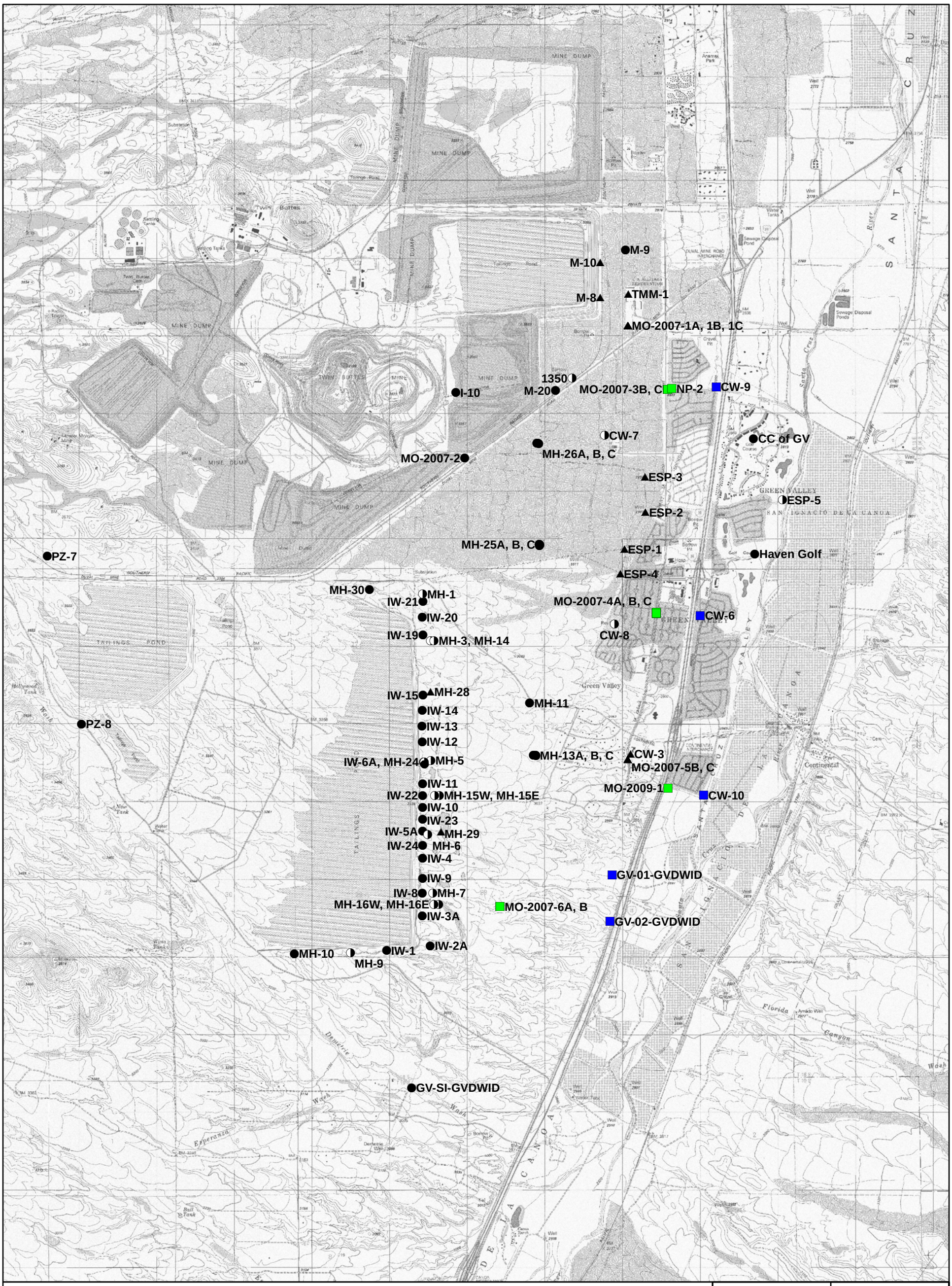
TABLE 3
Groundwater Elevation Data for Fourth Quarter 2011 and First Quarter 2012

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)
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	11/21/11	280.98	2663.93
MO-2007-6A	907607	Sierrita	3521842.050	498367.161	3043.37	10/6/11	311.10	2732.27
						1/11/12	311.24	2732.13
MO-2007-6B	907606	Sierrita	3521849.495	498367.887	3043.05	10/6/11	319.92	2723.13
						1/11/12	320.03	2723.02
MO-2009-1	910458	Sierrita	3523369.438	500534.089	2890.78	12/1/11	219.96	2670.82
					2890.78	1/11/12	222.55	2668.23
NP-2	605898	HGC	3528517.116	500582.904	2906.56	12/5/11	360.27	2546.29
						3/21/12	358.10	2548.46
TMM-1	616156	HGC	3529736.231	500018.323	2967.08	12/21/11	435.50	2531.58

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
Sierrita = Freeport-McMoRan Sierrita Inc.
UTM = Universal Transverse Mercator, Zone 12 North American Datum 1983 (NAD83)

FIGURES



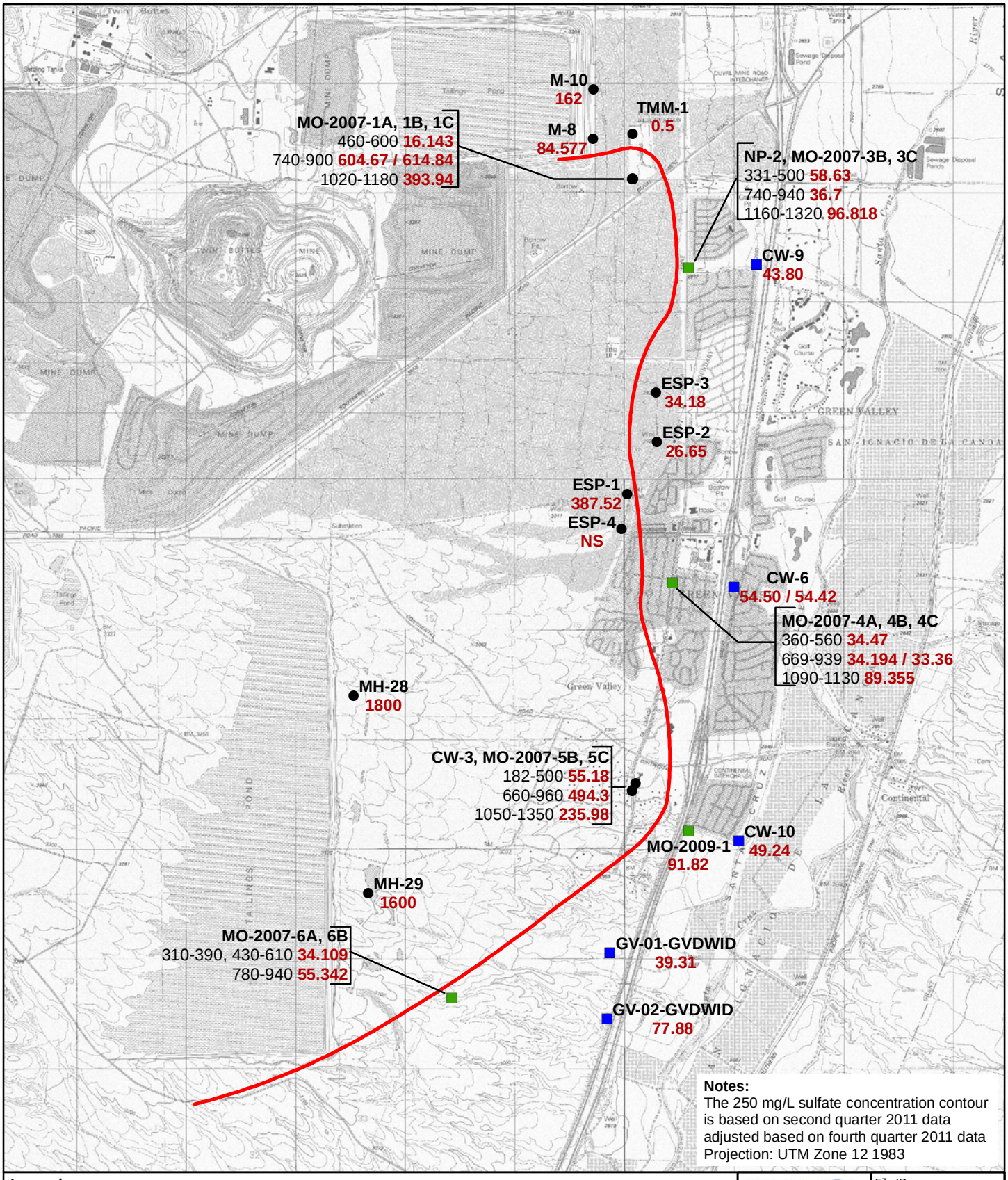
Legend

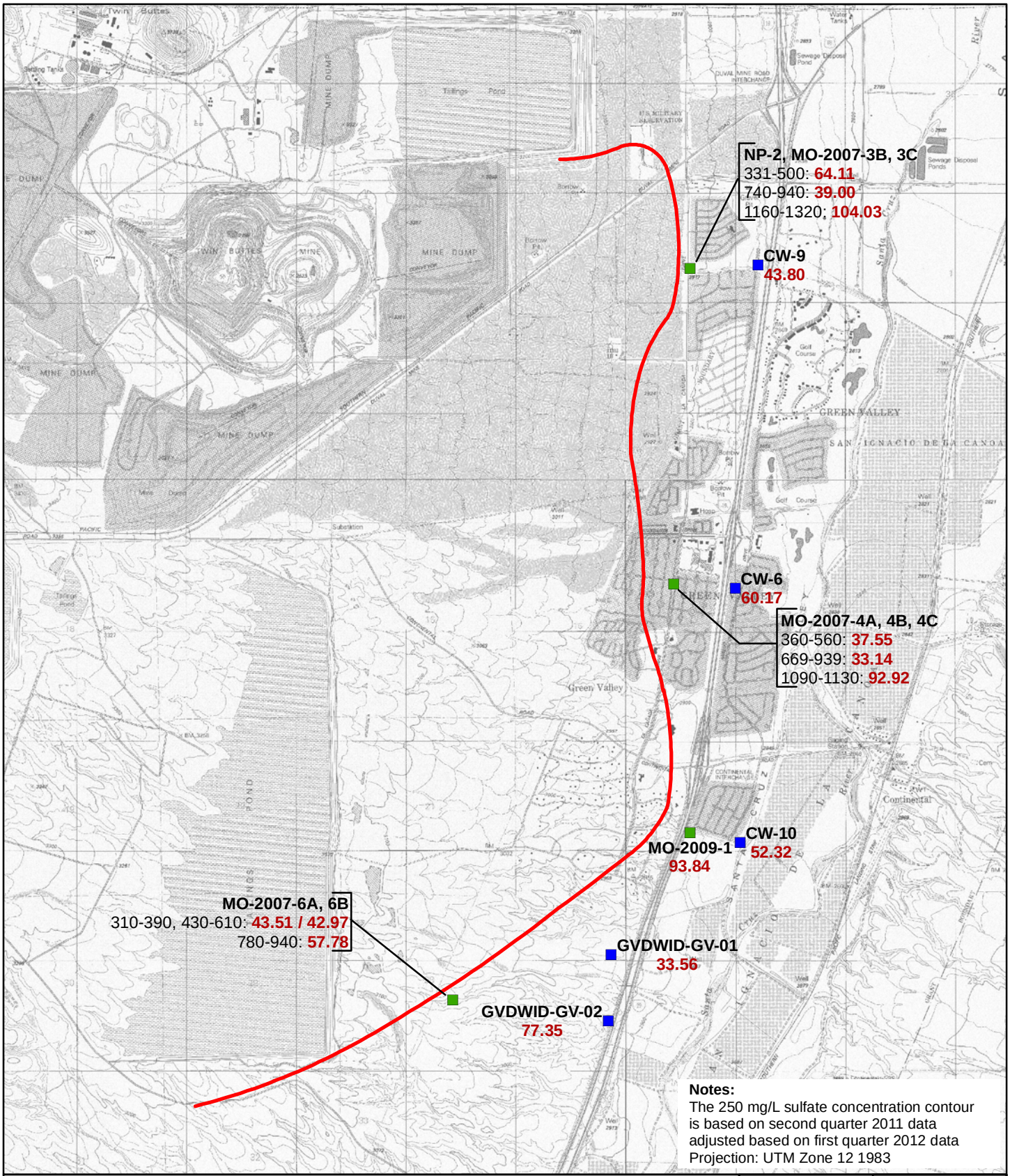
- ● Annual Sampling (Second Quarter)
- ◑ Annual Water Level Only (Second Quarter)
- ▲ Semi-Annual Sampling (Second and Fourth Quarters)
- ■ Quarterly Sampling - Sentinel Well
- ■ Quarterly Sampling - Drinking Water Supply Well

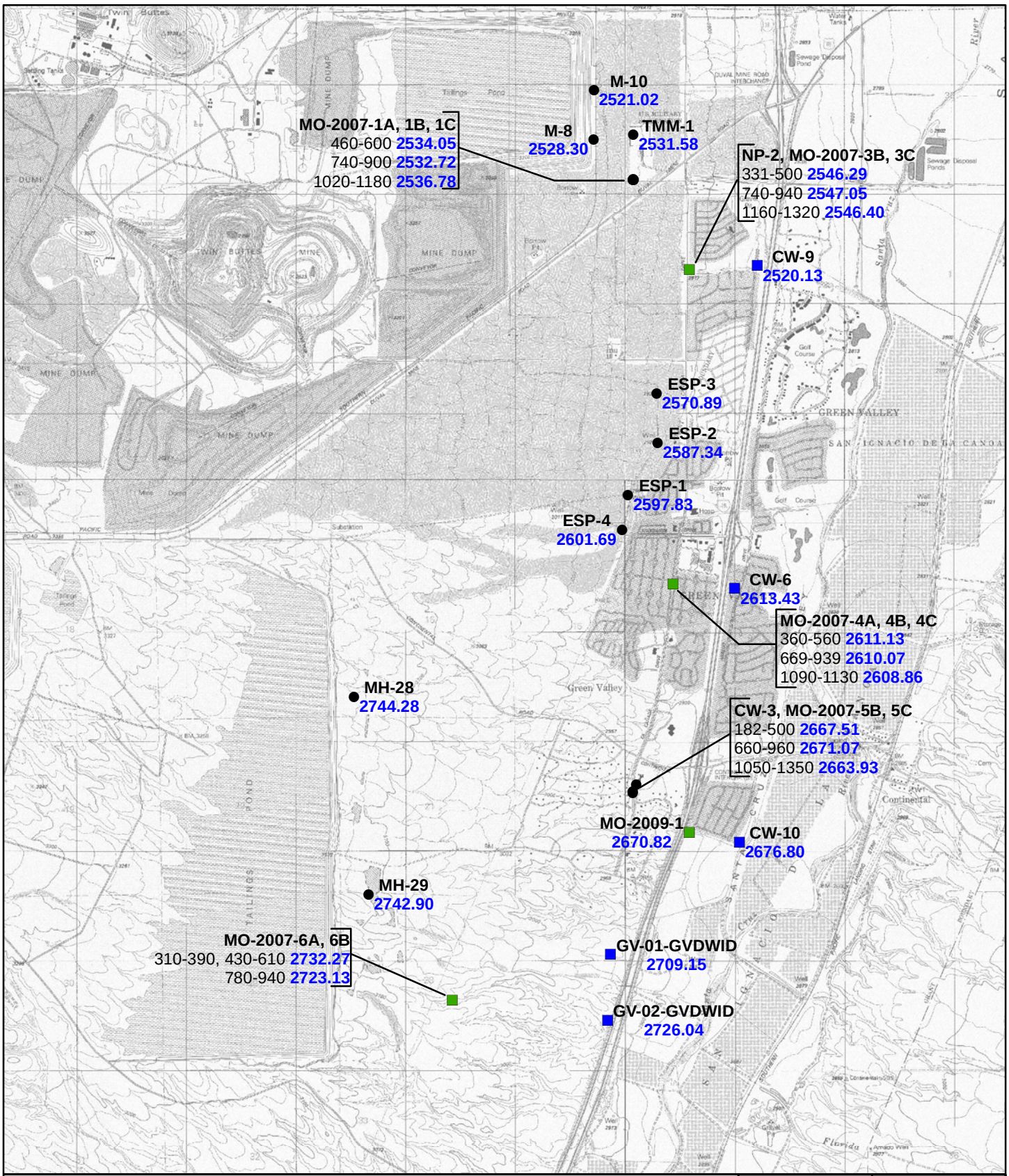
Date	File ID
4/19/12	055038-006B

CLEAR CREEK ASSOCIATES

Figure 1
Sampling Locations for
Pre-Implementation Groundwater
Monitoring


M-10
162
TMM-1
0.5
M-8
84.577
MO-2007-1A, 1B, 1C
460-600 16.143
740-900 604.67 / 614.84
1020-1180 393.94
NP-2, MO-2007-3B, 3C
331-500 58.63
740-940 36.7
1160-1320 96.818
CW-9
43.80
ESP-3
34.18
ESP-2
26.65
ESP-1
387.52
ESP-4
NS
CW-6
54.50 / 54.42
MO-2007-4A, 4B, 4C
360-560 34.47
669-939 34.194 / 33.36
1090-1130 89.355
MH-28
1800
CW-3, MO-2007-5B, 5C
182-500 55.18
660-960 494.3
1050-1350 235.98
MO-2009-1
91.82
CW-10
49.24
MH-29
1600
MO-2007-6A, 6B
310-390, 430-610 34.109
780-940 55.342
GV-01-GVDWID
39.31
GV-02-GVDWID
77.88
Notes:
The 250 mg/L sulfate concentration contour is based on second quarter 2011 data adjusted based on fourth quarter 2011 data
Projection: UTM Zone 12 1983
Legend
250 mg/L Sulfate Concentration Contour
CW-9 Well ID
43.8 Sulfate Concentration (mg/L)
Duplicate Results Separated by "/"
NS Not Sampled
Co-Located Wells
Screened Interval (ft bls): Sulfate Concentration (mg/L)
Well Symbols
Monitoring Well
Water Supply Well
Sentinel Well
0 2,000 4,000
Feet
CLEAR CREEK ASSOCIATES
File ID 055039-069
Date 4/19/12
Figure 2
Sulfate Concentrations in Groundwater
Fourth Quarter 2011


NP-2, MO-2007-3B, 3C
331-500: 64.11
740-940: 39.00
1160-1320: 104.03
CW-9
43.80
CW-6
60.17
MO-2007-4A, 4B, 4C
360-560: 37.55
669-939: 33.14
1090-1130: 92.92
MO-2009-1
93.84
CW-10
52.32
MO-2007-6A, 6B
310-390, 430-610: 43.51 / 42.97
780-940: 57.78
GVDWID-GV-01
33.56
GVDWID-GV-02
77.35
Green Valley
Continental
Notes:
The 250 mg/L sulfate concentration contour is based on second quarter 2011 data adjusted based on first quarter 2012 data
Projection: UTM Zone 12 1983
Legend
250 mg/L Sulfate Concentration Contour
CW-9 Well ID
43.80 Sulfate Concentration (mg/L)
Duplicate Results Separated by "/"
Co-Located Wells
Screened Interval (ft bls): Sulfate Concentration (mg/L)
Well Symbols
Monitoring Well
Water Supply Well
Sentinel Well
0 2,000 4,000
Feet
CLEAR CREEK ASSOCIATES
File ID 055039-070
Date 4/19/12
Figure 3
Sulfate Concentrations in Groundwater
First Quarter 2012



Legend

● **CW-9** Well ID
2515.65 Grounwater Elevation (ft amsl)

Well Symbols
- ● Monitoring Well
- ■ Water Supply Well
- ■ Sentinel Well

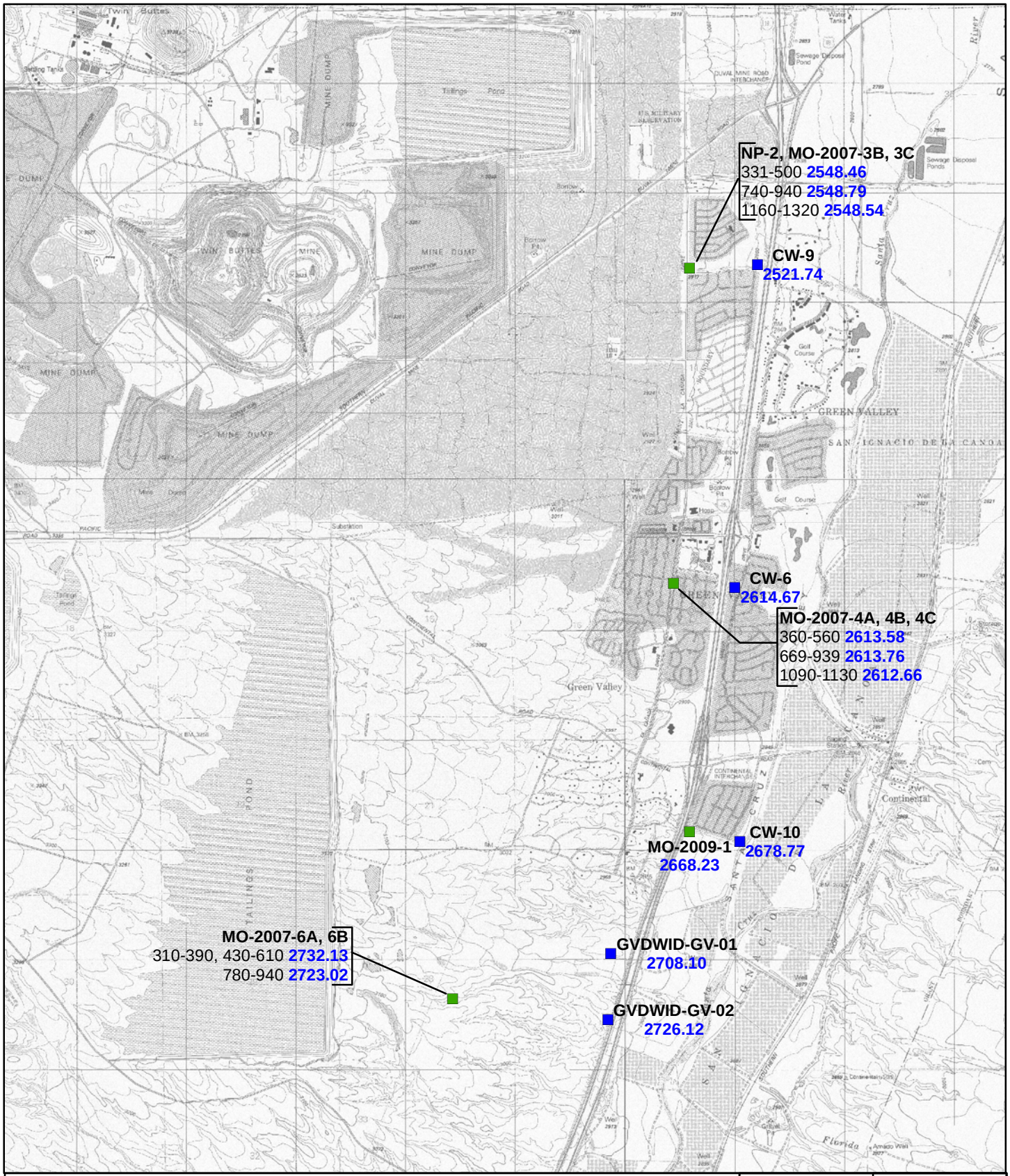
0 2,000 4,000
Feet

Co-Located Wells
Screened Interval (ft bls): **Groundwater Elevation (ft amsl)**

CLEAR CREEK ASSOCIATES

File ID 055039-068
Date 4/19/12

Figure 4
Groundwater Elevations
for Fourth Quarter 2011



Legend

● **CW-9** Well ID
2521.74 Groundwater Elevation (ft amsl)

Well Symbols
- ● Monitoring Well
- ■ Water Supply Well
- ■ Sentinel Well

0 2,000 4,000
Feet

Co-Located Wells
Screened Interval (ft bls): **Groundwater Elevation (ft amsl)**

CLEAR CREEK ASSOCIATES

File ID 055039-071
Date 4/19/12

Figure 5
Groundwater Elevations
for First Quarter 2012

APPENDIX A

DATA VERIFICATION REPORT

GROUNDWATER SAMPLES COLLECTED BY FREEPORT-MCMORAN SIERRITA INC. DURING FOURTH QUARTER 2011 AND FIRST QUARTER 2012

APPENDIX A

DATA VERIFICATION REPORT

GROUNDWATER SAMPLES COLLECTED BY FREEPORT-MCMORAN SIERRITA INC. DURING THE FOURTH QUARTER 2011 AND FIRST QUARTER 2012

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 Suite 101
Tucson, Arizona 85701

April 23, 2012

TABLE OF CONTENTS

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the fourth quarter 2011 and first quarter 2012 by Freeport-McMoRan Sierrita Inc. (Sierrita) pursuant to 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). Additionally, 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 49 samples collected are contained in 13 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.

ACZ Project ID	Wells Reported
Fourth Quarter 2011 Number of well samples collected: 31 Number of duplicate samples collected: 3 Total number of samples collected: 34	
L91123	MH-28, MH-29
L91570	MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-3B, MO-2007-3C , MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-6B, MO-2007-6A, DUP20111005A, DUP20111006A
L91977	M-8, M-20
L91978	M-9, M-10
L92157	M-2007-3B, M-2007-5B, M-2007-5C, ESP-2, ESP-3, MO2009-1
L92273	CW-3, NP-2, GV-1, GV-2
L92406	ESP-1, CW-6, CW-9, CW-10, DUP20111214A
L92480	TMM-1
First Quarter 2012 Number of well samples collected: 14 Number of duplicate samples collected: 1 Total number of samples collected: 15	
L92736	MO-2007-3B, MO-2007-3C, MO-2007-4C, MO-2007-6A, MO-2007-6B, MO-2009-1, DUP20120111A
L92839	MO-2007-4A, MO-2007-4B
L92953	CW-6, CW-9, CW-10
L93580	GV-1, GV-2
L93745	NP-2

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 analyses. 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 all 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. There were no cases where an "M1" flag was used in the fourth quarter 2011 and first quarter 2012. In each case where an "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 (RPDs) 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.

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 4 field duplicate samples were collected by Sierrita for filtered sulfate analysis (DUP20111005A, DUP20111006A, DUP20111214A, and DUP20120111A). The collection of 4 field duplicate samples 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, but exceeds the goal of collecting one duplicate sample for every twenty groundwater samples as stated in the Work Plan (HGC, 2006)

Results of the field duplicate samples collected are provided in the table below. The range of RPD values was between 0.15 and 2.47 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.

SVL Project No.	Well ID	Duplicate ID	Sample (mg/l)	Duplicate (mg/l)	RPD
L91570	MO-2007-4B	DUP20111005A	34.194	33.36	2.47%
L91570	MO-2007-1B	DUP20111006A	604.67	614.84	1.67%
L92406	CW-6	DUP20111214A	54.50	54.42	0.15%
L92736	MO-2007-6A	DUP20120111A	43.51	42.97	1.25%

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 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.

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.

APPENDIX B

ANALYTICAL DATA REPORTS

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

Analytical Report

October 21, 2011

Report to:
Aaron Hilshorst
FMI Gold & Copper - Sierrita
6200 W. Duval Mine Rd.
Green Valley, AZ 85614

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

cc: Ben Daigneau

Project ID: ZS03X3
ACZ Project ID: L91123

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 07, 2011. This project has been assigned to ACZ's project number, L91123. 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 L91123. 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 November 21, 2011. 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold Copper - Sierrita

October 21, 2011

Project ID: ZS03X3
ACZ Project ID: L91123

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 2 ground water samples from FMI Gold & Copper - Sierrita on October 7, 2011. 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 L91123. 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.

1. The TDS values have been flagged with the N1 qualifier on the extended qualifier report. The chemist noted that the drying oven was out of range. Data comparison to historical values may be warranted.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS03X3
Sample ID: MH-28

ACZ Sample ID: ***L91123-01***
Date Sampled: ***10/04/11 11:13***
Date Received: ***10/07/11***
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	10/15/11 3:16	msh
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.004	10/15/11 3:16	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	10/15/11 3:16	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	10/15/11 3:16	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:31	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:31	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:31	jjc
Lead, dissolved	M200.8 ICP-MS	0.0007	B		mg/L	0.0002	0.001	10/15/11 3:16	msh
Magnesium, dissolved	M200.7 ICP	103			mg/L	0.2	1	10/11/11 14:31	jjc
Molybdenum, dissolved	M200.7 ICP	0.04	B		mg/L	0.01	0.05	10/11/11 14:31	jjc
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:31	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0002	0.0005	10/15/11 3:16	msh
Thallium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0002	0.001	10/15/11 3:16	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.1	B	*	mg/L	0.1	0.5	10/13/11 17:37	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.07			mg/L	0.02	0.1	10/14/11 23:24	pjb
Residue, Filterable (TDS) @180C	SM2540C	3170			mg/L	10	20	10/07/11 15:42	las
Sulfate	D516-02 - Turbidimetric	1800		*	mg/L	100	500	10/13/11 9:47	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS03X3
Sample ID: MH-29

ACZ Sample ID: ***L91123-02***
Date Sampled: ***10/04/11 08:49***
Date Received: ***10/07/11***
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	10/15/11 3:20	msh
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.004	10/15/11 3:20	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	10/15/11 3:20	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	10/15/11 3:20	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:34	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:34	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:34	jjc
Lead, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0002	0.001	10/15/11 3:20	msh
Magnesium, dissolved	M200.7 ICP	92.3			mg/L	0.2	1	10/11/11 14:34	jjc
Molybdenum, dissolved	M200.7 ICP	0.02	B		mg/L	0.01	0.05	10/11/11 14:34	jjc
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/11/11 14:34	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0006			mg/L	0.0002	0.0005	10/15/11 3:20	msh
Thallium, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0002	0.001	10/15/11 3:20	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.1	B	*	mg/L	0.1	0.5	10/13/11 17:52	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.40			mg/L	0.02	0.1	10/14/11 23:26	pjb
Residue, Filterable (TDS) @180C	SM2540C	2940		*	mg/L	10	20	10/08/11 13:32	ndm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	10/13/11 9:47	ccp

Arizona license number: AZ0102

**** Please refer to Qualifier Reports for details.***

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91123***

Project ID: ZS03X3

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.02		.02163	mg/L	108.2	90	110			
WG311607ICB	ICB	10/15/11 2:51				.00089	mg/L		-0.0012	0.0012			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.01		.00963	mg/L	96.3	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.02	U	.01892	mg/L	94.6	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.02	U	.01933	mg/L	96.7	70	130	2.14	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.05		.05234	mg/L	104.7	90	110			
WG311607ICB	ICB	10/15/11 2:51				U	mg/L		-0.0015	0.0015			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.05005		.05063	mg/L	101.2	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.1001	.001	.1046	mg/L	103.5	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.1001	.001	.099	mg/L	97.9	70	130	5.5	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.05		.04742	mg/L	94.8	90	110			
WG311607ICB	ICB	10/15/11 2:51				U	mg/L		-0.0003	0.0003			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.05005		.04535	mg/L	90.6	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.1001	U	.09374	mg/L	93.6	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.1001	U	.09346	mg/L	93.4	70	130	0.3	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.05		.05184	mg/L	103.7	90	110			
WG311607ICB	ICB	10/15/11 2:51				U	mg/L		-0.0003	0.0003			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.0501		.04994	mg/L	99.7	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.1002	U	.09554	mg/L	95.3	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.1002	U	.0936	mg/L	93.4	70	130	2.05	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311221													
WG311221ICV	ICV	10/11/11 13:48	II110816-1	2		1.963	mg/L	98.2	95	105			
WG311221ICB	ICB	10/11/11 13:54				U	mg/L		-0.03	0.03			
WG311221LFB	LFB	10/11/11 14:07	II111006-5	.5		.483	mg/L	96.6	85	115			
L91063-01AS	AS	10/11/11 14:13	II111006-5	.5	U	.479	mg/L	95.8	85	115			
L91063-01ASD	ASD	10/11/11 14:16	II111006-5	.5	U	.487	mg/L	97.4	85	115	1.66	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91123***

Project ID: ZS03X3

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311221													
WG311221ICV	ICV	10/11/11 13:48	II110816-1	2		1.976	mg/L	98.8	95	105			
WG311221ICB	ICB	10/11/11 13:54				U	mg/L		-0.03	0.03			
WG311221LFB	LFB	10/11/11 14:07	II111006-5	.5		.49	mg/L	98	85	115			
L91063-01AS	AS	10/11/11 14:13	II111006-5	.5	U	.493	mg/L	98.6	85	115			
L91063-01ASD	ASD	10/11/11 14:16	II111006-5	.5	U	.499	mg/L	99.8	85	115	1.21	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311221													
WG311221ICV	ICV	10/11/11 13:48	II110816-1	2		1.947	mg/L	97.4	95	105			
WG311221ICB	ICB	10/11/11 13:54				U	mg/L		-0.03	0.03			
WG311221LFB	LFB	10/11/11 14:07	II111006-5	.5		.487	mg/L	97.4	85	115			
L91063-01AS	AS	10/11/11 14:13	II111006-5	.5	.06	.555	mg/L	99	85	115			
L91063-01ASD	ASD	10/11/11 14:16	II111006-5	.5	.06	.555	mg/L	99	85	115	0	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311464													
WG311464ICV	ICV	10/13/11 15:19	WC111004-7	2		1.98	mg/L	99	95	105			
WG311464ICB	ICB	10/13/11 15:26				U	mg/L		-0.3	0.3			
WG311464LFB1	LFB	10/13/11 15:35	WC110818-4	5.005		4.75	mg/L	94.9	90	110			
L91104-02AS	AS	10/13/11 17:12	WC110818-4	5.005	.1	4.93	mg/L	96.5	90	110			
L91104-02DUP	DUP	10/13/11 17:15			.1	.11	mg/L				9.5	20	RA
WG311464LFB2	LFB	10/13/11 18:20	WC110818-4	5.005		4.58	mg/L	91.5	90	110			

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.05		.0496	mg/L	99.2	90	110			
WG311607ICB	ICB	10/15/11 2:51				U	mg/L		-0.0003	0.0003			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.05005		.04808	mg/L	96.1	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.1001	.0003	.09784	mg/L	97.4	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.1001	.0003	.09442	mg/L	94	70	130	3.56	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311221													
WG311221ICV	ICV	10/11/11 13:48	II110816-1	100		100.6	mg/L	100.6	95	105			
WG311221ICB	ICB	10/11/11 13:54				U	mg/L		-0.6	0.6			
WG311221LFB	LFB	10/11/11 14:07	II111006-5	50.0051		50.7	mg/L	101.4	85	115			
L91063-01AS	AS	10/11/11 14:13	II111006-5	50.0051	.8	51.8	mg/L	102	85	115			
L91063-01ASD	ASD	10/11/11 14:16	II111006-5	50.0051	.8	51.99	mg/L	102.4	85	115	0.37	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91123***

Project ID: ZS03X3

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311221													
WG311221ICV	ICV	10/11/11 13:48	II110816-1	2		2.004	mg/L	100.2	95	105			
WG311221ICB	ICB	10/11/11 13:54				U	mg/L		-0.03	0.03			
WG311221LFB	LFB	10/11/11 14:07	II111006-5	.5		.505	mg/L	101	85	115			
L91063-01AS	AS	10/11/11 14:13	II111006-5	.5	U	.504	mg/L	100.8	85	115			
L91063-01ASD	ASD	10/11/11 14:16	II111006-5	.5	U	.508	mg/L	101.6	85	115	0.79	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311221													
WG311221ICV	ICV	10/11/11 13:48	II110816-1	2.002		2.087	mg/L	104.2	95	105			
WG311221ICB	ICB	10/11/11 13:54				U	mg/L		-0.03	0.03			
WG311221LFB	LFB	10/11/11 14:07	II111006-5	.5		.486	mg/L	97.2	85	115			
L91063-01AS	AS	10/11/11 14:13	II111006-5	.5	U	.494	mg/L	98.8	85	115			
L91063-01ASD	ASD	10/11/11 14:16	II111006-5	.5	U	.5	mg/L	100	85	115	1.21	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311618													
WG311618ICV	ICV	10/14/11 20:21	WI111001-2	2.416		2.378	mg/L	98.4	90	110			
WG311618ICB	ICB	10/14/11 20:23				U	mg/L		-0.06	0.06			
WG311622													
WG311622LFB1	LFB	10/14/11 22:57	WI110813-3	2		2.049	mg/L	102.5	90	110			
L91093-03AS	AS	10/14/11 23:16	WI110813-3	2	.45	2.452	mg/L	100.1	90	110			
L91093-04DUP	DUP	10/14/11 23:18			.75	.745	mg/L				0.7	20	
WG311622LFB2	LFB	10/14/11 23:40	WI110813-3	2		2.008	mg/L	100.4	90	110			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311155													
WG311155PBW	PBW	10/07/11 15:33				10	mg/L		-20	20			
WG311155LCSW	LCSW	10/07/11 15:33	PCN37647	260		264	mg/L	101.5	80	120			
L91123-01DUP	DUP	10/07/11 15:42			3170	3166	mg/L				0.1	20	
WG311172													
WG311172PBW	PBW	10/08/11 13:14				U	mg/L		-20	20			
WG311172LCSW	LCSW	10/08/11 13:15	PCN37648	260		252	mg/L	96.9	80	120			
L91150-04DUP	DUP	10/08/11 13:45			720	728	mg/L				1.1	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.05		.05258	mg/L	105.2	90	110			
WG311607ICB	ICB	10/15/11 2:51				U	mg/L		-0.0003	0.0003			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.05005		.04878	mg/L	97.5	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.1001	U	.09814	mg/L	98	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.1001	U	.09464	mg/L	94.5	70	130	3.63	20	

FMI Gold & Copper - Sierrita
Project ID: ZS03X3

ACZ Project ID: ***L91123***

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311456													
WG311456ICB	ICB	10/13/11 8:29				U	mg/L		-3	3			
WG311456ICV	ICV	10/13/11 8:29	WI111012-2	20		19.6	mg/L	98	90	110			
WG311456LFB	LFB	10/13/11 9:15	WI110714-1	9.99		9.5	mg/L	95.1	90	110			
L91092-03DUP	DUP	10/13/11 9:43			2000	1990	mg/L				0.5	20	
L91092-03AS	AS	10/13/11 9:43	SO4TURB10	10	2000	2000	mg/L	0	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG311607													
WG311607ICV	ICV	10/15/11 2:47	MS111007-2	.05		.05404	mg/L	108.1	90	110			
WG311607ICB	ICB	10/15/11 2:51				U	mg/L		-0.0003	0.0003			
WG311607LFB	LFB	10/15/11 2:55	MS111006-3	.0501		.0524	mg/L	104.6	85	115			
L90986-02AS	AS	10/15/11 3:06	MS111006-3	.1002	U	.10724	mg/L	107	70	130			
L90986-02ASD	ASD	10/15/11 3:09	MS111006-3	.1002	U	.10372	mg/L	103.5	70	130	3.34	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91123***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L91123-01	WG311464	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).
	WG311456	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.
L91123-02	WG311464	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).
	WG311172	Residue, Filterable (TDS) @180C	SM2540C	N1	See Case Narrative.
	WG311456	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.

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Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L91123***

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
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Sample Receipt

FMI Gold & Copper - Sierrita
ZS03X3

ACZ Project ID: L91123
Date Received: 10/07/2011 09:18
Received By: ksj
Date Printed: 10/7/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
3484		1.3	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS03X3

ACZ Project ID: L91123
Date Received: 10/07/2011 09:18
Received By: ksj
Date Printed: 10/7/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L91123-01	MH-28		Y		Y							
L91123-02	MH-29		Y		Y							

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L91123

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

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [x]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: Coming Soon
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSIS REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Quarterly							
MH-28	10/4/11 : 11:13	GW	3	x							
MH-29	10/4/11 : 08:49	GW	3	x							

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

REMARKS

Copy of report to Ben Daigneau contains only "SO4" results with QC Summary.

UPS Tracking #1Z 867 7E4 23 1000 7778

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
[signature]	10-6-11 16:00		
		WGS	10/7/11

L91123 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

09/18

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

Analytical Report

November 04, 2011

Report to:
Aaron Hilshorst
FMI Gold & Copper - Sierrita
6200 W. Duval Mine Rd.
Green Valley, AZ 85614

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

Project ID: ZS0000007L
ACZ Project ID: L91570

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 28, 2011. This project has been assigned to ACZ's project number, L91570. 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 L91570. 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 December 04, 2011. 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-1A

ACZ Sample ID: ***L91570-01***
Date Sampled: ***10/06/11 08:52***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	16.143			mg/L	0.5	2.5	11/01/11 2:39	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-1C

ACZ Sample ID: ***L91570-02***
Date Sampled: ***10/06/11 10:02***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	393.94			mg/L	5	25	11/01/11 3:00	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-1B

ACZ Sample ID: ***L91570-03***
Date Sampled: ***10/06/11 11:39***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	604.67			mg/L	5	25	11/01/11 13:32	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-6B

ACZ Sample ID: ***L91570-04***
Date Sampled: ***10/06/11 13:51***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	55.342			mg/L	0.5	2.5	11/01/11 4:04	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-6A

ACZ Sample ID: ***L91570-05***
Date Sampled: ***10/06/11 14:48***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.109			mg/L	0.5	2.5	11/01/11 4:46	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-4B

ACZ Sample ID: ***L91570-06***
Date Sampled: ***10/05/11 11:20***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.194			mg/L	0.5	2.5	11/01/11 5:07	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-4C

ACZ Sample ID: ***L91570-07***
Date Sampled: ***10/05/11 11:22***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	89.355			mg/L	0.5	2.5	11/01/11 5:28	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-3B

ACZ Sample ID: ***L91570-08***
Date Sampled: ***10/05/11 16:30***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.822			mg/L	0.5	2.5	11/01/11 6:31	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-3C

ACZ Sample ID: ***L91570-09***
Date Sampled: ***10/05/11 15:57***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	96.818			mg/L	2.5	12.5	11/01/11 6:53	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: MO-2007-4A

ACZ Sample ID: ***L91570-10***
Date Sampled: ***10/05/11 10:06***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.470			mg/L	0.5	2.5	11/01/11 7:14	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: DUP20111005A

ACZ Sample ID: ***L91570-11***
Date Sampled: ***10/05/11 00:00***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.360			mg/L	0.5	2.5	11/01/11 7:35	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L
Sample ID: DUP20111006A

ACZ Sample ID: ***L91570-12***
Date Sampled: ***10/06/11 00:00***
Date Received: ***10/28/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	614.84			mg/L	5	25	11/01/11 14:14	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000007L

ACZ Project ID: ***L91570***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG312206													
WG312206ICV1	ICV	10/25/11 9:27	WI111003-1	49.95		50.921	mg/L	101.9	90	110			
WG312206ICB	ICB	10/25/11 9:48				U	mg/L		-1.5	1.5			
WG312575													
WG312575LFB	LFB	10/31/11 22:05	WI110713-2	30		31.053	mg/L	103.5	90	110			
L91508-01DUP	DUP	10/31/11 22:47			42.894	42.756	mg/L				0.3	20	
L91508-02AS	AS	10/31/11 23:29	WI110713-2	30	47.347	76.088	mg/L	95.8	90	110			
L91570-04AS	AS	11/01/11 4:25	WI110713-2	30	55.342	84.071	mg/L	95.8	90	110			
L91570-03DUP	DUP	11/01/11 13:53			604.67	595.82	mg/L				1.5	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91570***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91570***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000007L

ACZ Project ID: L91570
Date Received: 10/28/2011 09:38
Received By: ksj
Date Printed: 10/28/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
2989		1.8	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000007L

ACZ Project ID: L91570
Date Received: 10/28/2011 09:38
Received By: ksj
Date Printed: 10/28/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L91570-01	MO-2007-1A									X		
L91570-02	MO-2007-1C									X		
L91570-03	MO-2007-1B									X		
L91570-04	MO-2007-6B									X		
L91570-05	MO-2007-6A									X		
L91570-06	MO-2007-4B									X		
L91570-07	MO-2007-4C									X		
L91570-08	MO-2007-3B									X		
L91570-09	MO-2007-3C									X		
L91570-10	MO-2007-4A									X		
L91570-11	DUP20111005A									X		
L91570-12	DUP20111006A									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493 L91570

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ]
If yes, please include state forms. Results will be reported to PQL. NO [x]

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000007L
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SULFATES							
MO-2007-1A	10/06/11 : 0852	GW	1	x							
MO-2007-1C	10/06/11 : 1002	GW	1	x							
MO-2007-1B	10/06/11 : 1139	GW	1	x							
MO-2007-6B	10/06/11 : 1351	GW	1	x							
MO-2007-6A	10/06/11 : 1448	GW	1	x							
MO-2007-4B	10/05/11 : 1120	GW	1	x							
MO-2007-4C	10/05/11 : 1122	GW	1	x							
MO-2007-3B	10/05/11 : 1630	GW	1	x							
MO-2007-3C	10/05/11 : 1557	GW	1	x							
MO-2007-4A	10/05/11 : 1006	GW	1	x							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7787

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	10/27/11 : 1400	UPS	
UPS		LEB	10.28.11 9:30

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L91570 Chain of Custody

ACZ Laboratories, Inc. L91570

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

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [x]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000007L
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SULFATES							
DUP20111005A	10/05/11	GW	1	x							
DUP20111006A	10/06/11	GW	1	x							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7787

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	10/27/11 : 1400	UPS	
UPS		[illegible]	10.28.11 9:38

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

December 02, 2011

Report to:
Aaron Hilshorst
FMI Gold & Copper - Sierrita
6200 W. Duval Mine Rd.
Green Valley, AZ 85614

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

Project ID: ZS0000012F
ACZ Project ID: L91977

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 18, 2011. This project has been assigned to ACZ's project number, L91977. 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 L91977. 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 January 02, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: M-8

ACZ Sample ID: ***L91977-01***
Date Sampled: ***11/17/11 08:49***
Date Received: ***11/18/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	84.577			mg/L	0.5	2.5	11/29/11 18:44	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: M-20

ACZ Sample ID: ***L91977-02***
Date Sampled: ***11/17/11 10:06***
Date Received: ***11/18/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1686.85			mg/L	25	125	11/29/11 19:05	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L91977***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG313886													
WG313886ICV	ICV	11/18/11 13:56	WI111003-14	49.95		50.309	mg/L	100.7	90	110			
WG313886ICB	ICB	11/18/11 14:17				U	mg/L		-1.5	1.5			
WG314303													
WG314303LFB1	LFB	11/29/11 16:16	WI111109-1	30		30.047	mg/L	100.2	90	110			
L91971-01DUP	DUP	11/29/11 16:58			214.769	213.875	mg/L				0.4	20	
L91971-02AS	AS	11/29/11 17:41	WI111109-1	150	219.651	364.905	mg/L	96.8	90	110			
WG314303LFB2	LFB	11/30/11 2:28	WI111109-1	30		29.475	mg/L	98.3	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L91977***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L91977***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L91977
Date Received: 11/18/2011 10:06
Received By: ksj
Date Printed: 11/21/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Is the trip blank for Cyanide present?			X
12) Is the trip blank for VOA present?			X
13) Are samples requiring no headspace, headspace free?			X
14) Do the samples that require a Foreign Soils Permit have one?			X

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)
3043	2.1	18

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L91977
Date Received: 11/18/2011 10:06
Received By: ksj
Date Printed: 11/21/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L91977-01	M-8									X		
L91977-02	M-20									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Hydrochloric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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: _____

ACZ Laboratories, Inc.

L91977

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

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-648-8844

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

Name:	Address:
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? 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.

YES [ ] NO [ ]

Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.

YES [ ] NO [X]

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000012F

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
M-8	11/17/2011 ; 08:49	GW	1	X							
M-20	11/17/2011 ; 10:06	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7796

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	11/17/2011 ; 1400	UPS	11/18/11

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L91977 Chain of Custody

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

Analytical Report

December 02, 2011

Report to:
Aaron Hilshorst
FMI Gold & Copper - Sierrita
6200 W. Duval Mine Rd.
Green Valley, AZ 85614

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

Project ID: ZS0000012F
ACZ Project ID: L91978

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 18, 2011. This project has been assigned to ACZ's project number, L91978. 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 L91978. 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 January 02, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: M-10

ACZ Sample ID: ***L91978-01***
Date Sampled: ***11/16/11 09:52***
Date Received: ***11/18/11***
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	11/30/11 10:22	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0061			mg/L	0.0005	0.002	11/30/11 10:22	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	11/30/11 10:22	pmc
Cadmium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	11/30/11 10:22	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:25	mfm
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:25	mfm
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:25	mfm
Lead, dissolved	M200.8 ICP-MS	0.0006			mg/L	0.0001	0.0005	11/30/11 10:22	pmc
Magnesium, dissolved	M200.7 ICP	12.1			mg/L	0.2	1	11/29/11 11:25	mfm
Molybdenum, dissolved	M200.7 ICP	0.02	B		mg/L	0.01	0.05	11/29/11 11:25	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:25	mfm
Selenium, dissolved	M200.8 ICP-MS	0.0011			mg/L	0.0001	0.0003	11/30/11 10:22	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	11/30/11 10:22	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.7		*	mg/L	0.1	0.5	11/29/11 12:44	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.73			mg/L	0.02	0.1	11/30/11 21:09	pjb
Residue, Filterable (TDS) @180C	SM2540C	430			mg/L	10	20	11/21/11 12:49	cra
Sulfate	D516-02 - Turbidimetric	162		*	mg/L	5	30	11/30/11 18:53	mpb

Arizona license number: AZ0102

**** Please refer to Qualifier Reports for details.***

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: M-9

ACZ Sample ID: ***L91978-02***
Date Sampled: ***11/16/11 14:46***
Date Received: ***11/18/11***
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	11/30/11 10:25	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0054			mg/L	0.0005	0.002	11/30/11 10:25	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	11/30/11 10:25	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	11/30/11 10:25	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:28	mfm
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:28	mfm
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:28	mfm
Lead, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0001	0.0005	11/30/11 10:25	pmc
Magnesium, dissolved	M200.7 ICP	12.8			mg/L	0.2	1	11/29/11 11:28	mfm
Molybdenum, dissolved	M200.7 ICP	0.02	B		mg/L	0.01	0.05	11/29/11 11:28	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	11/29/11 11:28	mfm
Selenium, dissolved	M200.8 ICP-MS	0.0030			mg/L	0.0001	0.0003	11/30/11 10:25	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	11/30/11 10:25	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	11/29/11 12:55	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.89			mg/L	0.02	0.1	11/30/11 21:10	pjb
Residue, Filterable (TDS) @180C	SM2540C	360			mg/L	10	20	11/21/11 12:50	cra
Sulfate	D516-02 - Turbidimetric	99		*	mg/L	5	30	11/30/11 18:53	mpb

Arizona license number: AZ0102

**** Please refer to Qualifier Reports for details.***

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L91978***

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.02		.02036	mg/L	101.8	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0012	0.0012			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.01		.01011	mg/L	101.1	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.01	U	.01079	mg/L	107.9	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.01	U	.01119	mg/L	111.9	70	130	3.64	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.05		.04989	mg/L	99.8	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0015	0.0015			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.05005		.04803	mg/L	96	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.05005	U	.05763	mg/L	115.1	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.05005	U	.05934	mg/L	118.6	70	130	2.92	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.05		.04511	mg/L	90.2	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0003	0.0003			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.05005		.04677	mg/L	93.4	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.05005	U	.05357	mg/L	107	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.05005	U	.05507	mg/L	110	70	130	2.76	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.05		.04792	mg/L	95.8	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0003	0.0003			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.0501		.04915	mg/L	98.1	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.0501	U	.05481	mg/L	109.4	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.0501	U	.0579	mg/L	115.6	70	130	5.48	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314307													
WG314307ICV	ICV	11/29/11 10:28	II111025-1	2		2.001	mg/L	100.1	95	105			
WG314307ICB	ICB	11/29/11 10:32				U	mg/L		-0.03	0.03			
WG314307LFB	LFB	11/29/11 10:45	II111122-2	.5		.503	mg/L	100.6	85	115			
L91944-03AS	AS	11/29/11 10:57	II111122-2	1	U	1.024	mg/L	102.4	85	115			
L91944-03ASD	ASD	11/29/11 11:00	II111122-2	1	U	1.032	mg/L	103.2	85	115	0.78	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91978***

Project ID: ZS0000012F

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314307													
WG314307ICV	ICV	11/29/11 10:28	II111025-1	2		1.926	mg/L	96.3	95	105			
WG314307ICB	ICB	11/29/11 10:32				U	mg/L		-0.03	0.03			
WG314307LFB	LFB	11/29/11 10:45	II111122-2	.5		.487	mg/L	97.4	85	115			
L91944-03AS	AS	11/29/11 10:57	II111122-2	1	U	1.035	mg/L	103.5	85	115			
L91944-03ASD	ASD	11/29/11 11:00	II111122-2	1	U	1.048	mg/L	104.8	85	115	1.25	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314307													
WG314307ICV	ICV	11/29/11 10:28	II111025-1	2		1.917	mg/L	95.9	95	105			
WG314307ICB	ICB	11/29/11 10:32				U	mg/L		-0.03	0.03			
WG314307LFB	LFB	11/29/11 10:45	II111122-2	.5		.485	mg/L	97	85	115			
L91944-03AS	AS	11/29/11 10:57	II111122-2	1	U	.974	mg/L	97.4	85	115			
L91944-03ASD	ASD	11/29/11 11:00	II111122-2	1	U	.984	mg/L	98.4	85	115	1.02	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314328													
WG314328ICV	ICV	11/29/11 12:27	WC111122-1	2		1.94	mg/L	97	95	105			
WG314328ICB	ICB	11/29/11 12:33				U	mg/L		-0.3	0.3			
WG314328LFB	LFB	11/29/11 12:40	WC110818-4	5.005		4.93	mg/L	98.5	90	110			
L91978-01AS	AS	11/29/11 12:48	WC110818-4	5.005	.7	5.52	mg/L	96.3	90	110			
L91978-01DUP	DUP	11/29/11 12:51			.7	.64	mg/L				9	20	RA

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.05		.04845	mg/L	96.9	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0003	0.0003			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.05005		.04931	mg/L	98.5	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.05005	U	.05459	mg/L	109.1	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.05005	U	.05743	mg/L	114.7	70	130	5.07	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314307													
WG314307ICV	ICV	11/29/11 10:28	II111025-1	100		104.04	mg/L	104	95	105			
WG314307ICB	ICB	11/29/11 10:32				U	mg/L		-0.6	0.6			
WG314307LFB	LFB	11/29/11 10:45	II111122-2	50.0051		49.68	mg/L	99.3	85	115			
L91944-03AS	AS	11/29/11 10:57	II111122-2	100.0102	8.5	115.2	mg/L	106.7	85	115			
L91944-03ASD	ASD	11/29/11 11:00	II111122-2	100.0102	8.5	116.58	mg/L	108.1	85	115	1.19	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91978***

Project ID: ZS0000012F

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314307													
WG314307ICV	ICV	11/29/11 10:28	II111025-1	2		2.031	mg/L	101.6	95	105			
WG314307ICB	ICB	11/29/11 10:32				.015	mg/L		-0.03	0.03			
WG314307LFB	LFB	11/29/11 10:45	II111122-2	.5		.491	mg/L	98.2	85	115			
L91944-03AS	AS	11/29/11 10:57	II111122-2	1	.03	1.042	mg/L	101.2	85	115			
L91944-03ASD	ASD	11/29/11 11:00	II111122-2	1	.03	1.031	mg/L	100.1	85	115	1.06	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314307													
WG314307ICV	ICV	11/29/11 10:28	II111025-1	2.002		1.979	mg/L	98.9	95	105			
WG314307ICB	ICB	11/29/11 10:32				U	mg/L		-0.03	0.03			
WG314307LFB	LFB	11/29/11 10:45	II111122-2	.5		.496	mg/L	99.2	85	115			
L91944-03AS	AS	11/29/11 10:57	II111122-2	1	U	1.057	mg/L	105.7	85	115			
L91944-03ASD	ASD	11/29/11 11:00	II111122-2	1	U	1.075	mg/L	107.5	85	115	1.69	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314451													
WG314451ICV	ICV	11/30/11 20:02	WI111001-2	2.416		2.393	mg/L	99	90	110			
WG314451ICB	ICB	11/30/11 20:03				U	mg/L		-0.06	0.06			
WG314379													
WG314379LFB	LFB	11/30/11 21:03	WI110813-3	2		2.084	mg/L	104.2	90	110			
L91976-01AS	AS	11/30/11 21:05	WI110813-3	2	1.78	3.763	mg/L	99.2	90	110			
L91976-02DUP	DUP	11/30/11 21:07			.54	.536	mg/L				0.7	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314009													
WG314009PBW	PBW	11/21/11 12:46				U	mg/L		-20	20			
WG314009LCSW	LCSW	11/21/11 12:46	PCN37655	260		266	mg/L	102.3	80	120			
L91985-01DUP	DUP	11/21/11 12:51			290	294	mg/L				1.4	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.05		.0516	mg/L	103.2	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0003	0.0003			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.05005		.04929	mg/L	98.5	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.05005	.0002	.06016	mg/L	119.8	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.05005	.0002	.0629	mg/L	125.3	70	130	4.45	20	

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L91978***

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314450													
WG314450ICB	ICB	11/30/11 16:05				U	mg/L		-3	3			
WG314450ICV	ICV	11/30/11 16:05	WI111128-7	20		18.9	mg/L	94.5	90	110			
WG314450LFB	LFB	11/30/11 18:47	WI111111-3	10.03		9.5	mg/L	94.7	90	110			
L91976-02AS	AS	11/30/11 18:47	WI111111-3	10.03	15	22.9	mg/L	78.8	90	110			M2
L91976-01DUP	DUP	11/30/11 19:06			900	880	mg/L				2.2	20	RA

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314382													
WG314382ICV	ICV	11/30/11 8:53	MS111007-2	.05		.05175	mg/L	103.5	90	110			
WG314382ICB	ICB	11/30/11 8:56				U	mg/L		-0.0003	0.0003			
WG314382LFB	LFB	11/30/11 8:59	MS111006-3	.0501		.05269	mg/L	105.2	85	115			
L91974-08AS	AS	11/30/11 9:48	MS111006-3	.0501	U	.05929	mg/L	118.3	70	130			
L91974-08ASD	ASD	11/30/11 9:51	MS111006-3	.0501	U	.06207	mg/L	123.9	70	130	4.58	20	

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Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L91978***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L91978-01	WG314328	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).
	WG314450	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, 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).
L91978-02	WG314328	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).
	WG314450	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, 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).

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Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L91978***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L91978
Date Received: 11/18/2011 10:06
Received By: ksj
Date Printed: 11/21/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
3043		2.1	18

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L91978
Date Received: 11/18/2011 10:06
Received By: ksj
Date Printed: 11/21/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L91978-01	M-10		Y		Y							
L91978-02	M-9		Y		Y							

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L91978

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

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000012F
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Quarterly							
M-10	11/16/2011 ; 09:52	GW	3	X							
M-9	11/16/2011 ; 1446	GW	3	X							

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

REMARKS

Copy of report to Ben Daigneau contains only "SO4" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 7796

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
	11/17/2011 ; 1400	UPS	
		WGS	11/18/11

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L91978 Chain of Custody

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

Analytical Report

December 12, 2011

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

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

cc: Ben Daigneau

Project ID: ZS0000012F
ACZ Project ID: L92157

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 02, 2011. This project has been assigned to ACZ's project number, L92157. 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 L92157. 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 January 12, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: MO-2007-5B

ACZ Sample ID: ***L92157-01***
Date Sampled: *11/21/11 12:08*
Date Received: *12/02/11*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	494.3		*	mg/L	5	25	12/06/11 18:51	ccp

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: MO-2007-5C

ACZ Sample ID: ***L92157-02***
Date Sampled: *11/21/11 17:03*
Date Received: *12/02/11*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	235.98		*	mg/L	1.5	7.5	12/06/11 19:12	ccp

Arizona license number: AZ0102

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: ESP-2

ACZ Sample ID: ***L92157-03***
Date Sampled: *11/22/11 09:40*
Date Received: *12/02/11*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	26.65		*	mg/L	0.5	2.5	12/06/11 19:33	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: ESP-3

ACZ Sample ID: ***L92157-04***
Date Sampled: *11/22/11 12:52*
Date Received: *12/02/11*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.18			mg/L	0.5	2.5	12/08/11 12:13	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: MO-2007-3B

ACZ Sample ID: ***L92157-05***
Date Sampled: *11/22/11 15:18*
Date Received: *12/02/11*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.70			mg/L	0.5	2.5	12/06/11 20:36	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: MO-2009-1

ACZ Sample ID: ***L92157-06***
Date Sampled: *12/01/11 12:30*
Date Received: *12/02/11*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.82			mg/L	1	5	12/06/11 21:18	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L92157***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG314564													
WG314564ICV	ICV	12/02/11 12:06	WI111003-1	49.95		49.82	mg/L	99.7	90	110			
WG314564ICB	ICB	12/02/11 12:27				U	mg/L		-1.5	1.5			
WG314685													
WG314685LFB	LFB	12/06/11 14:37	WI111109-1	30		29.48	mg/L	98.3	90	110			
L92065-04DUP	DUP	12/06/11 15:19			U	U	mg/L				0	20	RA
L92065-05AS	AS	12/06/11 16:02	WI111109-1	300	U	285.4	mg/L	95.1	90	110			
L92157-05AS	AS	12/06/11 20:57	WI111109-1	30	36.7	65.34	mg/L	95.5	90	110			
L92157-04DUP	DUP	12/08/11 12:34			34.18	34.13	mg/L				0.1	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92157***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L92157-01	WG314685	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).
L92157-02	WG314685	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).
L92157-03	WG314685	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 Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92157***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92157
Date Received: 12/02/2011 10:10
Received By: ksj
Date Printed: 12/2/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
3089		2.4	17

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92157
Date Received: 12/02/2011 10:10
Received By: ksj
Date Printed: 12/2/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92157-01	MO-2007-5B									X		
L92157-02	MO-2007-5C									X		
L92157-03	ESP-2									X		
L92157-04	ESP-3									X		
L92157-05	MO-2007-3B									X		
L92157-06	MO-2009-1									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L92157

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

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: #ZS0000012F
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-5B	11/21/11 ; 1208	GW	1	X							
MO-2007-5C	11/21/11 ; 1703	GW	1	X							
ESP-2	11/22/11 ; 0940	GW	1	X							
ESP-3	11/22/11 ; 1252	GW	1	X							
MO-2007-3B	11/22/11 ; 1518	GW	1	X							
MO-2009-1	12/01/11 ; 1230	GW	1	X							

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 7803

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	12/1/11 1515		
			12-2-11 10:10

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L92157 Chain of Custody

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

Analytical Report

December 22, 2011

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

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

cc: Ben Daigneau

Project ID: ZS0000012F
ACZ Project ID: L92273

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 09, 2011. This project has been assigned to ACZ's project number, L92273. 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 L92273. 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 January 22, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: CW-3

ACZ Sample ID: ***L92273-01***
Date Sampled: ***12/05/11 12:48***
Date Received: ***12/09/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	55.18			mg/L	0.5	2.5	12/20/11 17:21	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: NP-2

ACZ Sample ID: ***L92273-02***
Date Sampled: ***12/05/11 15:13***
Date Received: ***12/09/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	58.63			mg/L	0.5	2.5	12/20/11 17:42	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: GV-1

ACZ Sample ID: ***L92273-03***
Date Sampled: ***12/07/11 11:49***
Date Received: ***12/09/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	39.31			mg/L	0.5	2.5	12/20/11 18:45	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: GV-2

ACZ Sample ID: ***L92273-04***
Date Sampled: ***12/07/11 12:25***
Date Received: ***12/09/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	77.88			mg/L	0.5	2.5	12/20/11 19:06	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L92273***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG315531													
WG315531ICV	ICV	12/20/11 0:41	WI111003-14	49.95		50.92	mg/L	101.9	90	110			
WG315531ICB	ICB	12/20/11 1:02				U	mg/L		-1.5	1.5			
WG315590													
WG315590LFB1	LFB	12/20/11 14:32	WI111109-1	30		30.13	mg/L	100.4	90	110			
L92262-01AS	AS	12/20/11 15:56	WI111109-1	30	10.53	40.63	mg/L	100.3	90	110			
WG315590LFB2	LFB	12/21/11 0:44	WI111109-1	30		29.73	mg/L	99.1	90	110			
L92236-03DUP	DUP	12/21/11 15:51			109.7	108.33	mg/L				1.3	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L92273***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L92273***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92273
Date Received: 12/09/2011 12:01
Received By: ksj
Date Printed: 12/9/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
1326		1.6	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92273
Date Received: 12/09/2011 12:01
Received By: ksj
Date Printed: 12/9/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92273-01	CW-3									X		
L92273-02	NP-2									X		
L92273-03	GV-1									X		
L92273-04	GV-2									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L92273

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

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

Name:	Address:
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? 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.

YES [ ] NO [ ]

Are samples for CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.

YES [ ] NO [X]

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000012F

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CW-3	12/05/2011 ; 12:48	GW	1	X							
NP-2	12/05/2011 ; 15:13	GW	1	X							
GV-1	12/07/2011 ; 11:49	GW	1	X							
GV-2	12/07/2011 ; 12:25	GW	1	X							

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 7821

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	12/8/11 1430		
			12-9-11 12:01

L92273 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

December 30, 2011

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

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

cc: Ben Daigneau

Project ID: ZS0000012F
ACZ Project ID: L92406

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 17, 2011. This project has been assigned to ACZ's project number, L92406. 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 L92406. 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 January 30, 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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: ESP-1

ACZ Sample ID: ***L92406-01***
Date Sampled: ***12/13/11 10:56***
Date Received: ***12/17/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	387.52			mg/L	2.5	12.5	12/27/11 11:24	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: CW-10

ACZ Sample ID: ***L92406-02***
Date Sampled: ***12/14/11 09:02***
Date Received: ***12/17/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	49.24			mg/L	0.5	2.5	12/22/11 19:41	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: CW-6

ACZ Sample ID: ***L92406-03***
Date Sampled: ***12/14/11 09:55***
Date Received: ***12/17/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	54.50			mg/L	0.5	2.5	12/22/11 20:45	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: CW-9

ACZ Sample ID: ***L92406-04***
Date Sampled: ***12/14/11 10:52***
Date Received: ***12/17/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	43.80			mg/L	0.5	2.5	12/22/11 21:06	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: DUP20111214A

ACZ Sample ID: ***L92406-05***
Date Sampled: ***12/14/11 00:00***
Date Received: ***12/17/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	54.42			mg/L	0.5	2.5	12/22/11 21:27	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L92406***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG315531													
WG315531ICV	ICV	12/20/11 0:41	WI111003-14	49.95		50.92	mg/L	101.9	90	110			
WG315531ICB	ICB	12/20/11 1:02				U	mg/L		-1.5	1.5			
WG315755													
WG315755LFB	LFB	12/22/11 16:31	WI111109-1	30		31.09	mg/L	103.6	90	110			
L92402-07DUP	DUP	12/22/11 17:14			5.42	5.4	mg/L				0.4	20	
L92402-08AS	AS	12/22/11 17:56	WI111109-1	30	6.49	36.77	mg/L	100.9	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L92406***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L92406***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92406
Date Received: 12/17/2011 10:54
Received By: ksj
Date Printed: 12/19/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
3427		4.3	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92406
Date Received: 12/17/2011 10:54
Received By: ksj
Date Printed: 12/19/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92406-01	ESP-1									X		
L92406-02	CW-10									X		
L92406-03	CW-6									X		
L92406-04	CW-9									X		
L92406-05	DUP20111214A									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc.

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

L92406

CHAIN of CUSTODY

Report to:

Name: Aaron Hilshorst	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: aaron_hilshorst@fmi.com	Telephone: 520-393-2601

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

Name:	Address:
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? YES [ ] NO [ ]

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]

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

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000012F

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

ANALYSIS REQUESTED (Preservation Codes)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
ESP-1	12/13/11 : 10:56	GW	1	X							
CW-10	12/14/11 : 09:02	GW	1	X							
CW-6	12/14/11 : 09:55	GW	1	X							
CW-9	12/14/11 : 10:52	GW	1	X							
DUP20111214A	12/14/11	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7830

L92406 Chain of Custody

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	12/15/11 1500		
			12/17/11 10:54

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

January 05, 2012

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

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

cc: Ben Daigneau

Project ID: ZS0000012F
ACZ Project ID: L92480

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 22, 2011. This project has been assigned to ACZ's project number, L92480. 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 L92480. 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 February 05, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F
Sample ID: TMM-1

ACZ Sample ID: ***L92480-01***
Date Sampled: ***12/21/11 14:19***
Date Received: ***12/22/11***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U	*	mg/L	0.5	2.5	12/30/11 13:22	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS0000012F

ACZ Project ID: ***L92480***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG315531													
WG315531ICV	ICV	12/20/11 0:41	WI111003-14	49.95		50.92	mg/L	101.9	90	110			
WG315531ICB	ICB	12/20/11 1:02				U	mg/L		-1.5	1.5			
WG316002													
WG316002LFB	LFB	12/30/11 13:01	WI111109-1	30		30.7	mg/L	102.3	90	110			
L92480-01DUP	DUP	12/30/11 13:43			U	U	mg/L				0	20	RA
L92506-01AS	AS	12/30/11 14:25	WI111109-1	30	27.88	57.19	mg/L	97.7	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92480***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L92480-01	WG316002	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 Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L92480***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92480
Date Received: 12/22/2011 15:09
Received By: ksj
Date Printed: 12/27/2011

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
Na14553		1.9	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000012F

ACZ Project ID: L92480
Date Received: 12/22/2011 15:09
Received By: ksj
Date Printed: 12/27/2011

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92480-01	TMM-1									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L92480

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson
Company: Freeport-McMoRan Sierrita Inc.
E-mail: jonathan_anderson@fmi.com
Address: 6200 W. Duval Mine Road
Green Valley, AZ 85614
Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau
Company: Clear Creek Associates
E-mail: bdaigneau@clearcreekassociates.com
Telephone: 520-622-3222

Invoice to:

Name:
Company:
E-mail:
Address:
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐
If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for CO DW Compliance Monitoring? YES ☐ NO ☒
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000012F
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
TMM-1	12/21/11 : 1419	GW	1	✕							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8204

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	12/21/11 1500		
			12/15/11

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L92480 Chain of Custody

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

Analytical Report

January 23, 2012

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

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

cc: Ben Daigneau

Project ID: ZS000001JL
ACZ Project ID: L92736

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 13, 2012. This project has been assigned to ACZ's project number, L92736. 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 L92736. 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 February 23, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-6A

ACZ Sample ID: ***L92736-01***
Date Sampled: *01/11/12 09:59*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	43.51			mg/L	0.5	2.5	01/17/12 14:32	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-6B

ACZ Sample ID: ***L92736-02***
Date Sampled: *01/11/12 10:48*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	57.78			mg/L	0.5	2.5	01/17/12 15:14	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2009-1

ACZ Sample ID: ***L92736-03***
Date Sampled: *01/11/12 12:57*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	93.84			mg/L	1	5	01/17/12 15:57	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-3B

ACZ Sample ID: ***L92736-04***
Date Sampled: *01/11/12 15:38*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	39.00			mg/L	0.5	2.5	01/17/12 16:18	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-3C

ACZ Sample ID: ***L92736-05***
Date Sampled: *01/11/12 16:39*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	104.03			mg/L	2.5	12.5	01/17/12 16:39	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: DUP20120111A

ACZ Sample ID: ***L92736-06***
Date Sampled: *01/11/12 00:00*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	42.97			mg/L	0.5	2.5	01/17/12 17:00	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-4C

ACZ Sample ID: ***L92736-07***
Date Sampled: *01/12/12 10:24*
Date Received: *01/13/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	92.92			mg/L	0.5	2.5	01/17/12 17:21	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL

ACZ Project ID: ***L92736***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG316581													
WG316581ICV	ICV	01/12/12 14:08	WI120105-1	50.15		50.32	mg/L	100.3	90	110			
WG316581ICB	ICB	01/12/12 14:29				U	mg/L		-1.5	1.5			
WG316854													
WG316854LFB	LFB	01/17/12 14:11	WI111109-1	30		30.99	mg/L	103.3	90	110			
L92736-01DUP	DUP	01/17/12 14:53			43.51	43.56	mg/L				0.1	20	
L92736-02AS	AS	01/17/12 15:35	WI111109-1	30	57.78	87.16	mg/L	97.9	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92736***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92736***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L92736
Date Received: 01/13/2012 10:16
Received By: ksj
Date Printed: 1/16/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
2290		0.6	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L92736
Date Received: 01/13/2012 10:16
Received By: ksj
Date Printed: 1/16/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92736-01	MO-2007-6A									X		
L92736-02	MO-2007-6B									X		
L92736-03	MO-2009-1									X		
L92736-04	MO-2007-3B									X		
L92736-05	MO-2007-3C									X		
L92736-06	DUP20120111A									X		
L92736-07	MO-2007-4C									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L92736

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

CHAIN of CUSTODY

Report to:

Name: Jonathan 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:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000001JL
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-6A	01/11/12 : 0959	GW	1	X							
MO-2007-6B	01/11/12 : 1048	GW	1	X							
MO-2009-1	01/11/12 : 1257	GW	1	X							
MO-2007-3B	01/11/12 : 1538	GW	1	X							
MO-2007-3C	01/11/12 : 1639	GW	1	X							
DUP20120111A	01/11/12	GW	1	X							
MO-2007-4C	01/12/12 : 1024	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8151

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	1/12/12 1400		
			1-13-12 10:46

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L92736 Chain of Custody

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

Analytical Report

January 30, 2012

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

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

cc: Ben Daigneau

Project ID: ZS000001JL
ACZ Project ID: L92839

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 20, 2012. This project has been assigned to ACZ's project number, L92839. 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 L92839. 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 February 29, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-4B

ACZ Sample ID: ***L92839-01***
Date Sampled: *01/17/12 10:55*
Date Received: *01/20/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.14			mg/L	0.5	2.5	01/24/12 19:58	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: MO-2007-4A

ACZ Sample ID: ***L92839-02***
Date Sampled: *01/17/12 11:53*
Date Received: *01/20/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.55			mg/L	0.5	2.5	01/26/12 14:34	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL

ACZ Project ID: ***L92839***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG316581													
WG316581ICV	ICV	01/12/12 14:08	WI120105-1	50.15		50.32	mg/L	100.3	90	110			
WG316581ICB	ICB	01/12/12 14:29				U	mg/L		-1.5	1.5			
WG317203													
WG317203LFB	LFB	01/24/12 12:35	WI111109-1	30		30.66	mg/L	102.2	90	110			
L92815-05DUP	DUP	01/24/12 18:13			8.54	8.49	mg/L				0.6	20	
L92815-06AS	AS	01/24/12 18:55	WI111109-1	30	8.67	36.39	mg/L	92.4	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92839***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92839***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L92839
Date Received: 01/20/2012 09:44
Received By: ksj
Date Printed: 1/20/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
Na14706		2.1	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L92839
Date Received: 01/20/2012 09:44
Received By: ksj
Date Printed: 1/20/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92839-01	MO-2007-4B									X		
L92839-02	MO-2007-4A									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L92839

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

CHAIN of CUSTODY

Report to:

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:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000001JL
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-4B	01/17/12 ; 10:55	GW	1	X							
MO-2007-4A	01/17/12 ; 11:53	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8160

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
	1/19/12 1430		
			1-20-12 9:44

L92839 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

February 07, 2012

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

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

Project ID: ZS000001JL
ACZ Project ID: L92953

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 27, 2012. This project has been assigned to ACZ's project number, L92953. 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 L92953. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 07, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: CW-10

ACZ Sample ID: ***L92953-01***
Date Sampled: *01/24/12 09:35*
Date Received: *01/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	52.32			mg/L	0.5	2.5	02/02/12 16:35	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: CW-6

ACZ Sample ID: ***L92953-02***
Date Sampled: *01/24/12 10:29*
Date Received: *01/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	60.17			mg/L	0.5	2.5	02/02/12 17:17	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: CW-9

ACZ Sample ID: ***L92953-03***
Date Sampled: *01/24/12 11:28*
Date Received: *01/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	45.60			mg/L	0.5	2.5	02/02/12 18:00	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL

ACZ Project ID: ***L92953***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG316581													
WG316581ICV	ICV	01/12/12 14:08	WI120105-1	50.15		50.32	mg/L	100.3	90	110			
WG316581ICB	ICB	01/12/12 14:29				U	mg/L		-1.5	1.5			
WG317711													
WG317711LFB	LFB	02/02/12 16:14	WI111109-1	30		31.38	mg/L	104.6	90	110			
L92953-01DUP	DUP	02/02/12 16:56			52.32	52.19	mg/L				0.2	20	
L92953-02AS	AS	02/02/12 17:38	WI111109-1	30	60.17	89.53	mg/L	97.9	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92953***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L92953***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L92953
Date Received: 01/27/2012 09:57
Received By: ksj
Date Printed: 1/27/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
3035		1.3	17

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L92953
Date Received: 01/27/2012 09:57
Received By: ksj
Date Printed: 1/27/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L92953-01	CW-10									X		
L92953-02	CW-6									X		
L92953-03	CW-9									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L92953

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: jonathon_anderson@fmi.com	Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to:

Name:	Address:
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? YES [ ] NO [ ]

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

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]

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

PROJECT INFORMATION

Quote #:

Project/PO #: ZS000001JL

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CW-10	1/24/12 ; 0935	GW	1	X							
CW-6	1/24/12 ; 1029	GW	1	X							
CW-9	1/24/12 ; 1128	GW	1	X							

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 8179

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
	1/26/12 1430		
			1-28-12 9:15

L92953 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

March 27, 2012

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

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

cc: Ben Daigneau

Project ID: ZS000001JL
ACZ Project ID: L93580

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 15, 2012. This project has been assigned to ACZ's project number, L93580. 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 L93580. 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 April 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: GV-1

ACZ Sample ID: ***L93580-01***
Date Sampled: ***03/14/12 09:35***
Date Received: ***03/15/12***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	35.56			mg/L	0.5	2.5	03/19/12 19:42	ccp

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: GV-2

ACZ Sample ID: ***L93580-02***
Date Sampled: ***03/14/12 10:22***
Date Received: ***03/15/12***
Sample Matrix: ***Ground Water***

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	77.35			mg/L	0.5	2.5	03/19/12 20:03	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL

ACZ Project ID: ***L93580***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG319577													
WG319577ICV	ICV	03/14/12 11:40	WI120105-1	50.15		50.67	mg/L	101	90	110			
WG319577ICB	ICB	03/14/12 12:01				U	mg/L		-1.5	1.5			
WG319701													
WG319701LFB	LFB	03/19/12 17:56	WI120312-2	30		29.55	mg/L	98.5	90	110			
L93566-01DUP	DUP	03/19/12 18:39			54.34	54.24	mg/L				0.2	20	
L93566-03AS	AS	03/19/12 19:21	WI120312-2	30	43.11	72.17	mg/L	96.9	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L93580***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L93580***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L93580
Date Received: 03/15/2012 10:04
Received By: ksj
Date Printed: 3/15/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
2440		0.2	8

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L93580
Date Received: 03/15/2012 10:04
Received By: ksj
Date Printed: 3/15/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L93580-01	GV-1									X		
L93580-02	GV-2									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc. L93580

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson
Company: Freeport-McMoRan Sierrita Inc.
E-mail: jonothan_anderson@fmi.com

Address: 6200 W. Duval Mine Road
Green Valley, AZ 85614
Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau
Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com
Telephone: 520-622-3222

Invoice to:

Name:
Company:
E-mail:

Address:
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES / NO
If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for CO DW Compliance Monitoring? YES / NO X
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000001JL
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
GV-1	03/14/12 : 0935	GW	1	X							
GV-2	03/14/12 : 1022	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8133

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
A Alvarez	3/14/12 1345		

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L93580 Chain of Custody

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

Analytical Report

March 30, 2012

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

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

cc: Ben Daigneau

Project ID: ZS000001JL
ACZ Project ID: L93745

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 26, 2012. This project has been assigned to ACZ's project number, L93745. 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 L93745. 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 April 30, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL
Sample ID: NP-2

ACZ Sample ID: ***L93745-01***
Date Sampled: *03/21/12 10:12*
Date Received: *03/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	64.11			mg/L	0.5	2.5	03/29/12 14:46	ccp

Arizona license number: AZ0102

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

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)

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

Method References

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

FMI Gold & Copper - Sierrita
Project ID: ZS000001JL

ACZ Project ID: ***L93745***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG319577													
WG319577ICV	ICV	03/14/12 11:40	WI120105-1	50.15		50.67	mg/L	101	90	110			
WG319577ICB	ICB	03/14/12 12:01				U	mg/L		-1.5	1.5			
WG320291													
WG320291LFB	LFB	03/29/12 12:18	WI120312-2	30		29.15	mg/L	97.2	90	110			
L93586-04AS	AS	03/29/12 14:25	WI120312-2	30	U	29	mg/L	96.7	90	110			
L93745-01DUP	DUP	03/29/12 15:07			64.11	64.12	mg/L				0	20	

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Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L93745***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

ACZ Laboratories, Inc.
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Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L93745***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L93745
Date Received: 03/26/2012 09:31
Received By: ksj
Date Printed: 3/26/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

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)
2546		8.9	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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L93745
Date Received: 03/26/2012 09:31
Received By: ksj
Date Printed: 3/26/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L93745-01	NP-2									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

ACZ Laboratories, Inc.

L93745

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson
Company: Freeport-McMoRan Sierrita Inc.
E-mail: jonothan_anderson@fmi.com
Address: 6200 W. Duval Mine Road
Green Valley, AZ 85614
Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau
Company: Clear Creek Associates
E-mail: bdaigneau@clearcreekassociates.com
Telephone: 520-622-3222

Invoice to:

Name:
Company:
E-mail:
Address:
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [ ] NO [ ]
If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for CO DW Compliance Monitoring? YES [ ] NO [X]
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000001JL
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
NP-2	3/21/2012 : 1012	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8124
**PLEASE RUSH THIS ANALYSES

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	1400 3/22/12		3-26-12 9:3

L93745 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

APPENDIX C

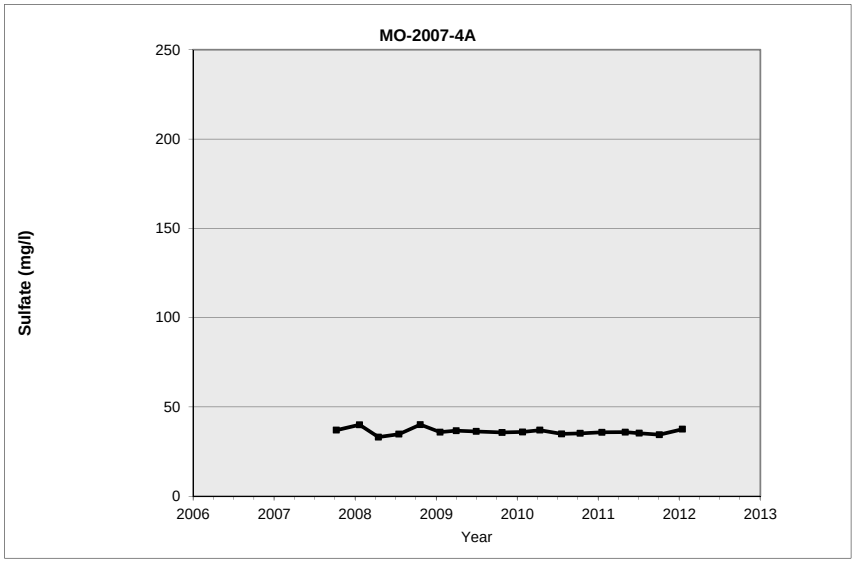
TIME SERIES GRAPHS OF SULFATE CONCENTRATION

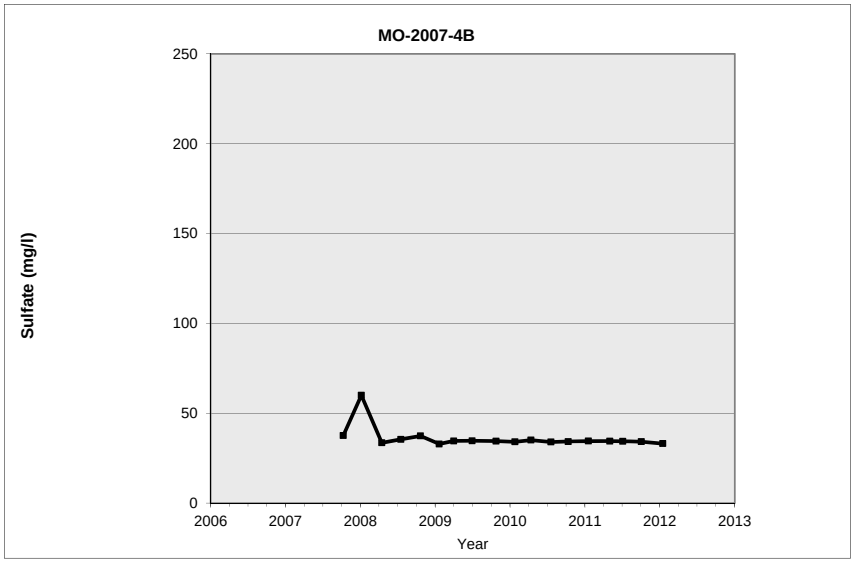
TABLE C.1
Sulfate Concentration Over Time

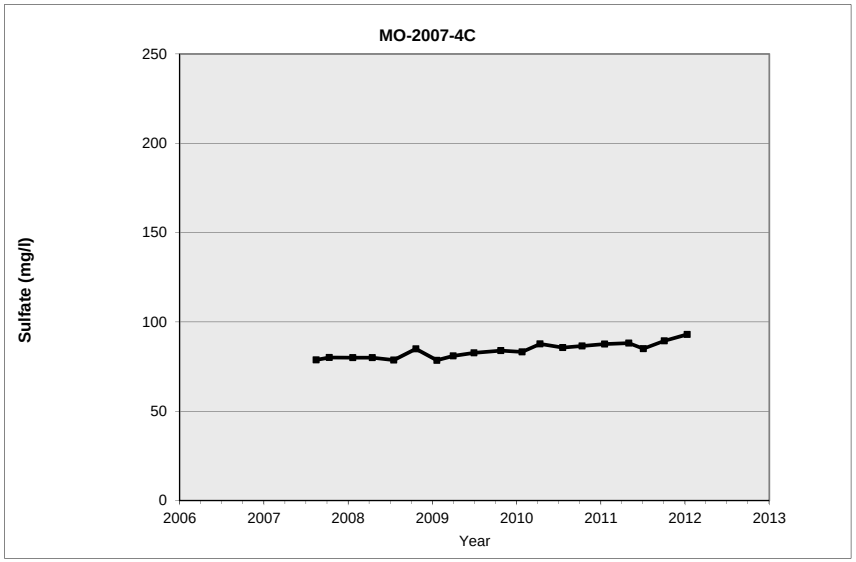
	Date and dissolved sulfate concentration reported in milligrams per liter (mg/l)																						
Well ID	**Q4 2006**	**Q1 2007**	**Q2 2007**	**Q3 2007**	**Q4 2007**	**Q1 2008**	**Q2 2008**	**Q3 2008**	**Q4 2008**	**Q1 2009**	**Q2 2009**	**Q3 2009**	**Q4 2009**	**Q1 2010**	**Q2 2010**	**Q3 2010**	**Q4 2010**	**Q1 2011**	**Q2 2011**	**Q3 2011**	**Q4 2011**	**Q12012**
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
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 44.1	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 44.2	07/27/10 44.1	10/14/10 44.2	02/24/11 42.7	04/28/11 44.4	07/20/11 43.9	12/14/11 43.8	1/24/12 43.8
CW-10	12/04/06 37.2	01/24/07 48.6	05/14/07 52.8	07/10/07 51.7	10/02/07 47.7	01/08/08 45.3	04/15/08 50.8	07/08/08 50.5	10/07/08 48.3	02/06/09 51.3	04/22/09 47.9	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 50.2	04/28/11 49.6	07/20/11 50.7	12/14/11 49.24	1/24/12 52.32
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	01/29/09 113	04/16/09 130	NS	11/10/09 173	NS	4/28/10 204	NS	10/15/10 291	NS	05/03/11 359	NS	12/13/11 387.52	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 30	04/18/08 27.6	07/25/08 26.8	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
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 34	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

NS = No sample
Q1 = First 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







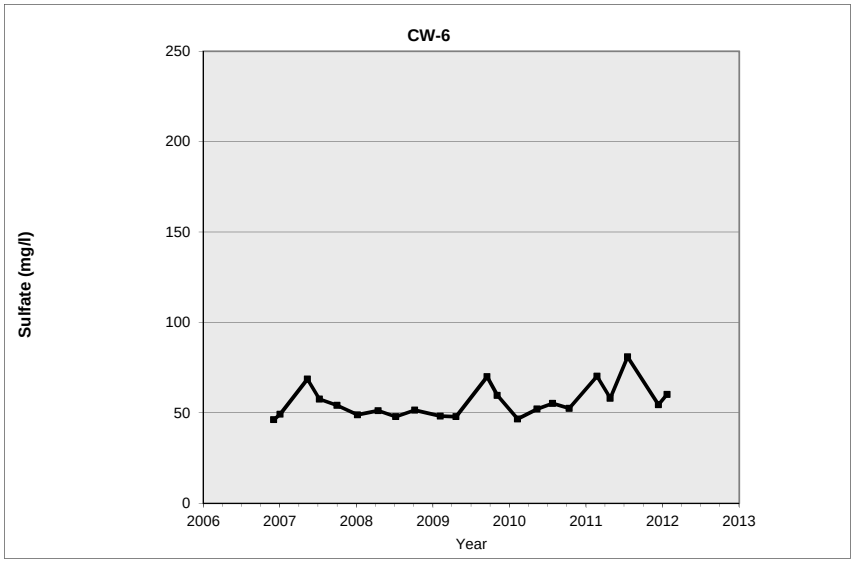
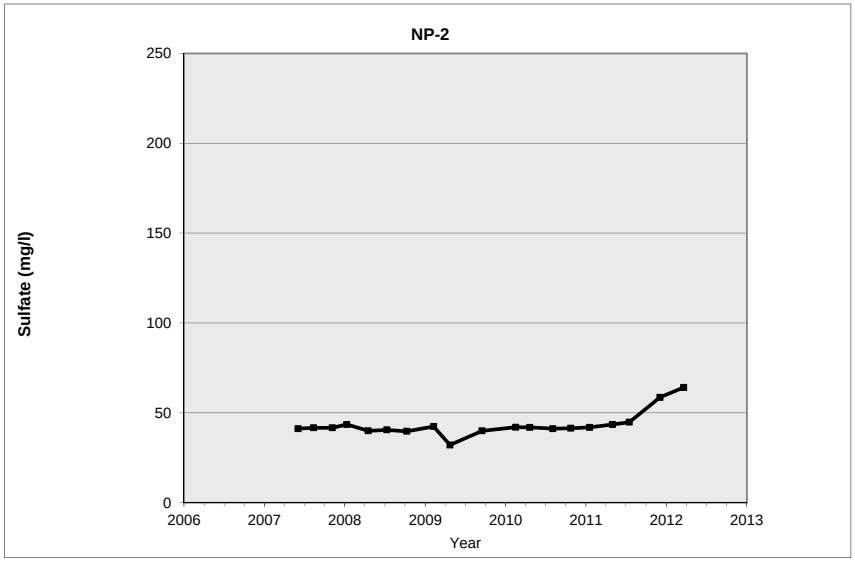
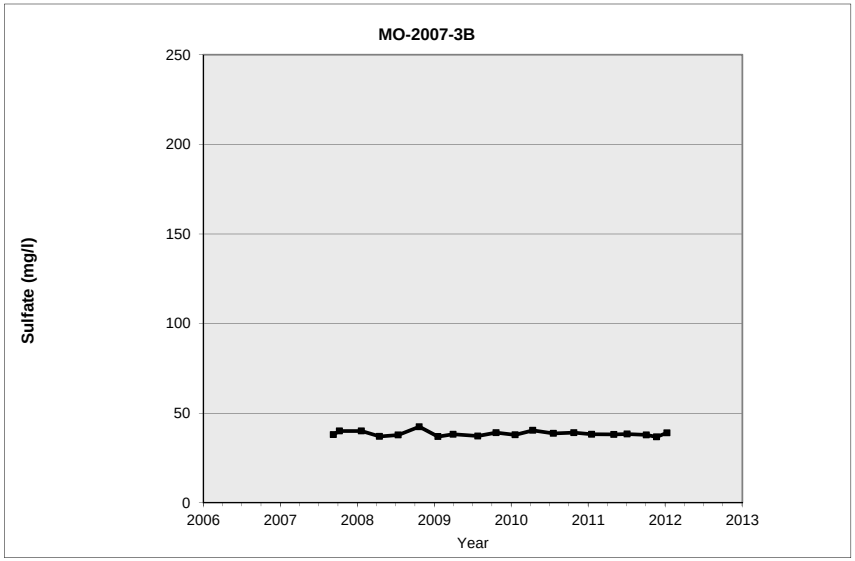
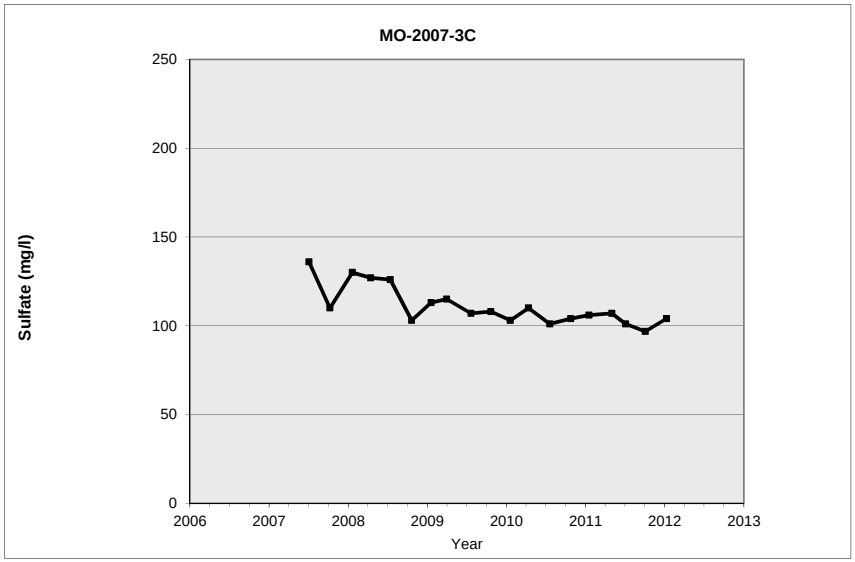


FIGURE C.2
SULFATE CONCENTRATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND CW-9







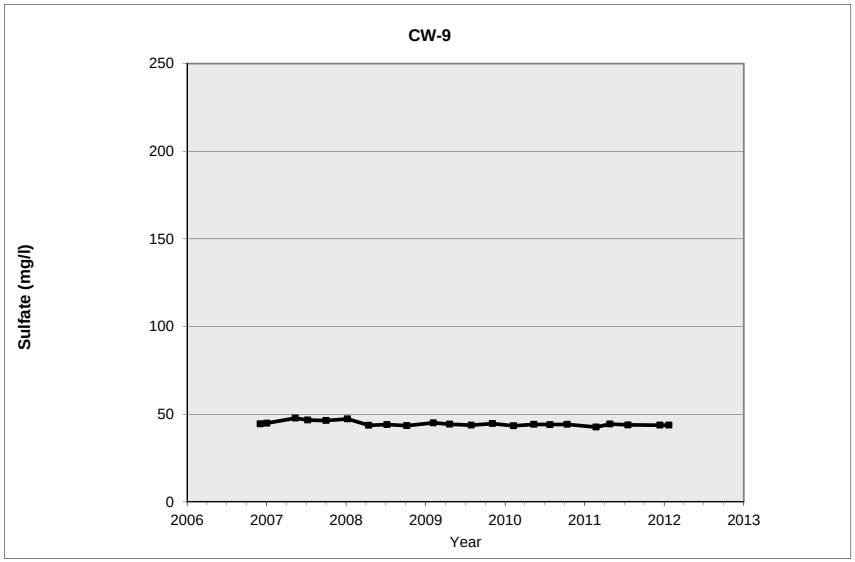
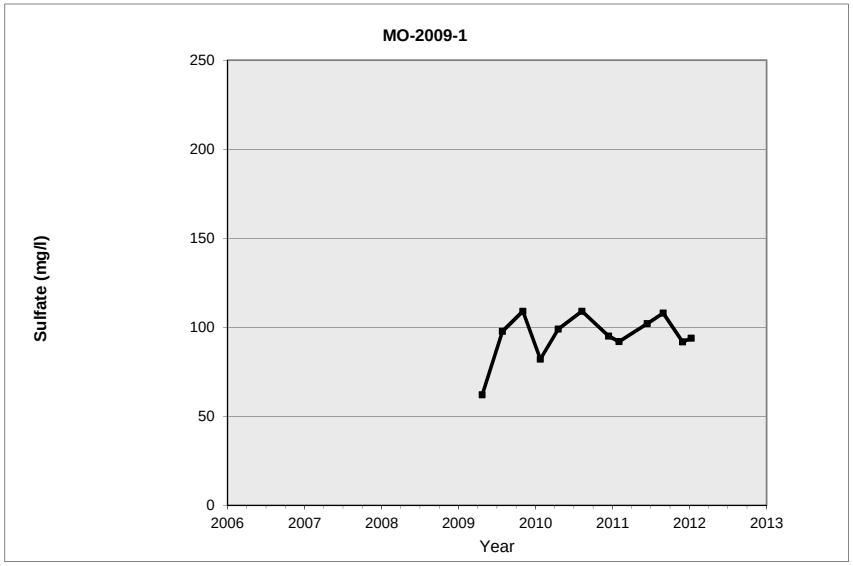


FIGURE C.3
SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2009-1 AND CW-10



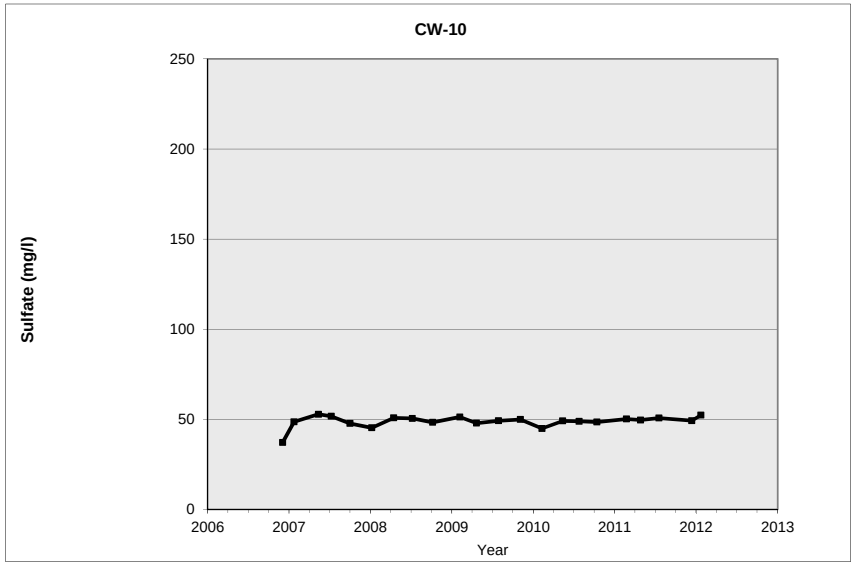
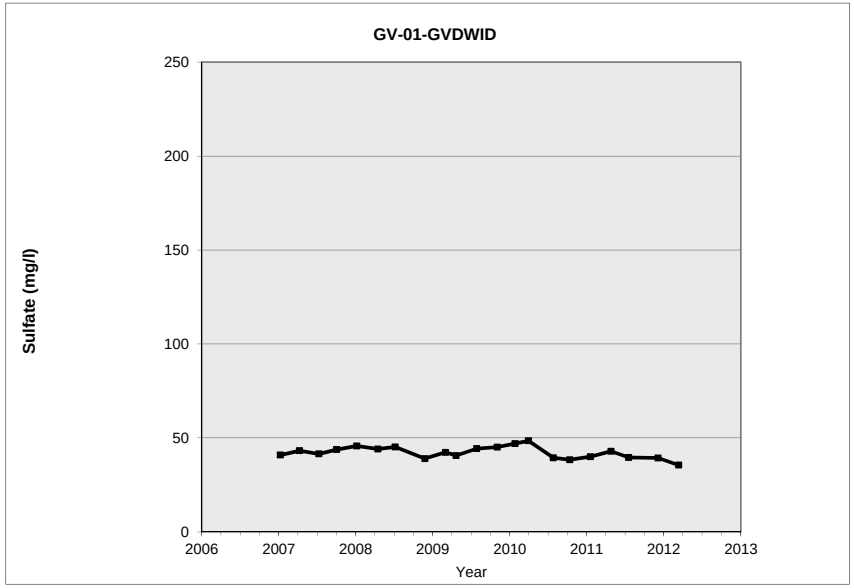
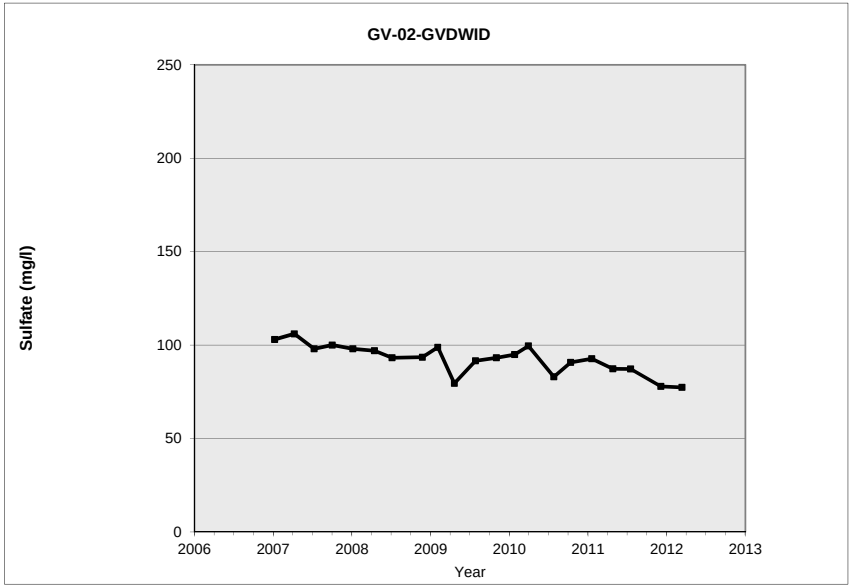
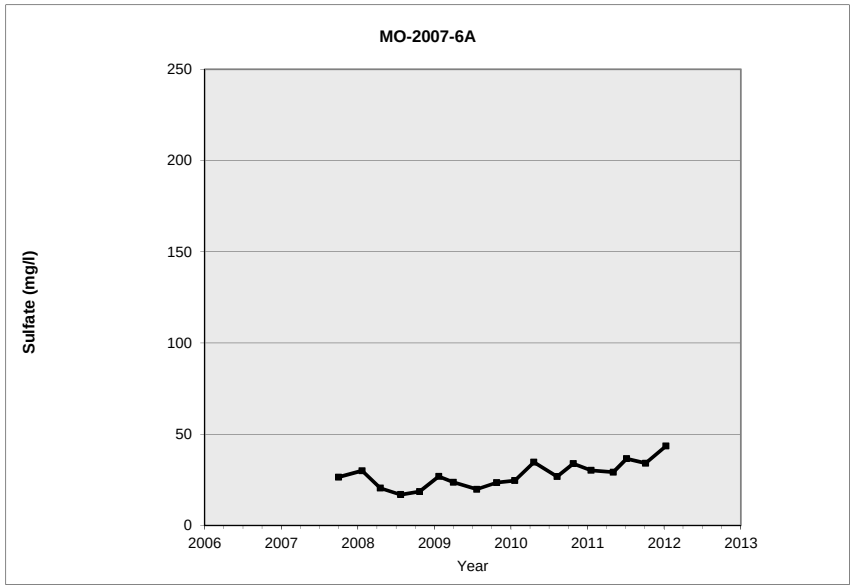


FIGURE C.4
SULFATE CONCENTRATION OVER TIME FOR WELLS
GV-01-GVDWID, GV-02-GVDWID, MO-2007-6A, AND MO-2007-6B







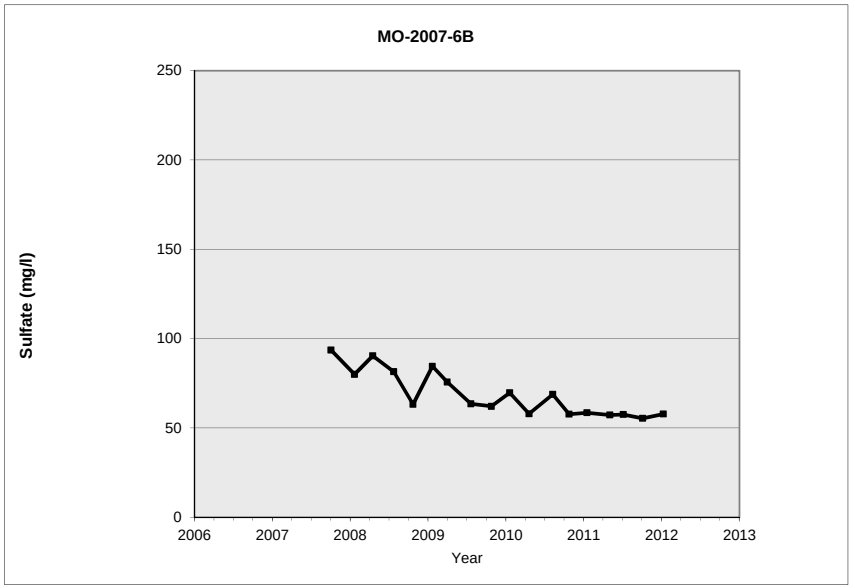
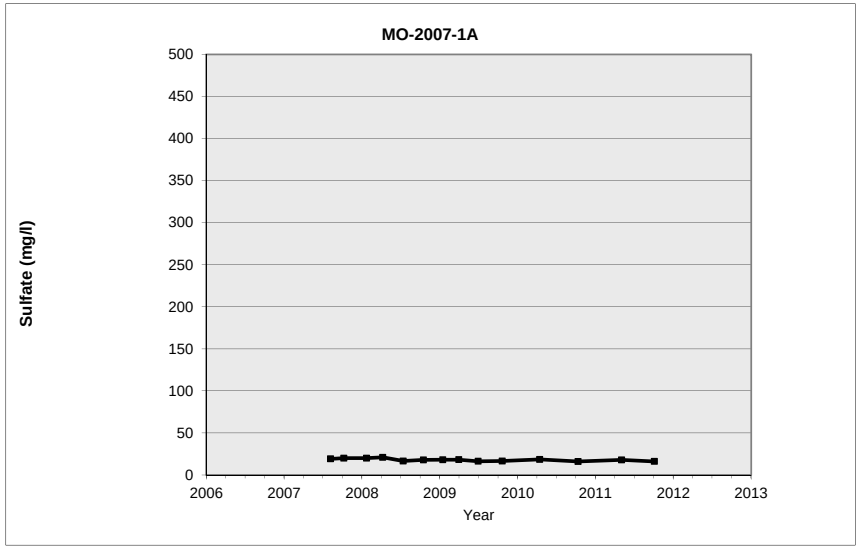
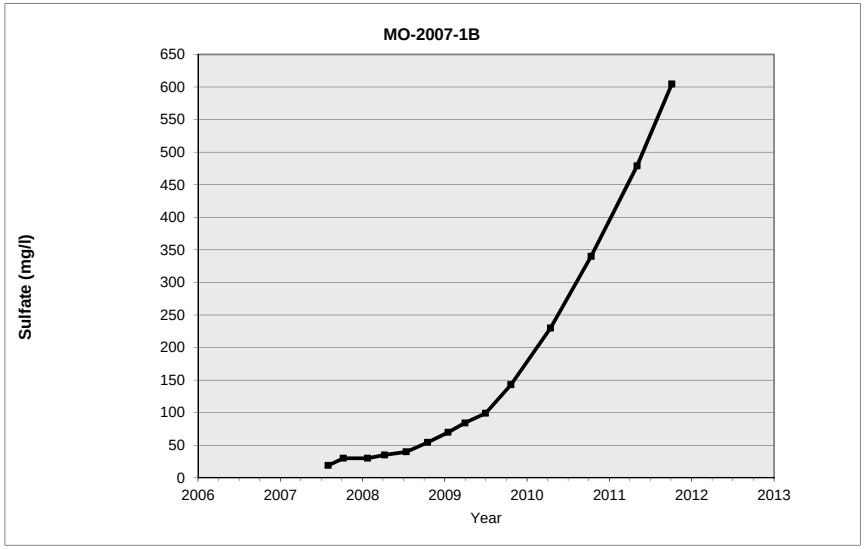


FIGURE C.5
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, AND MO-2007-1C





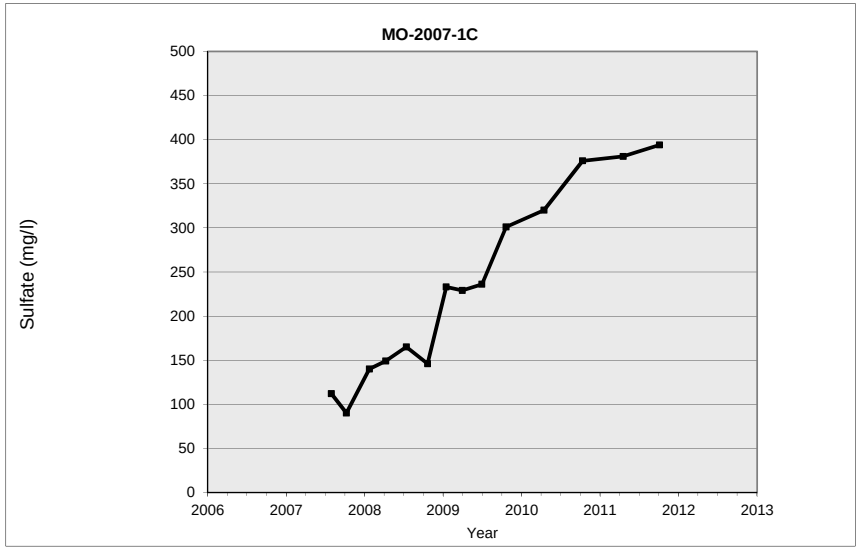
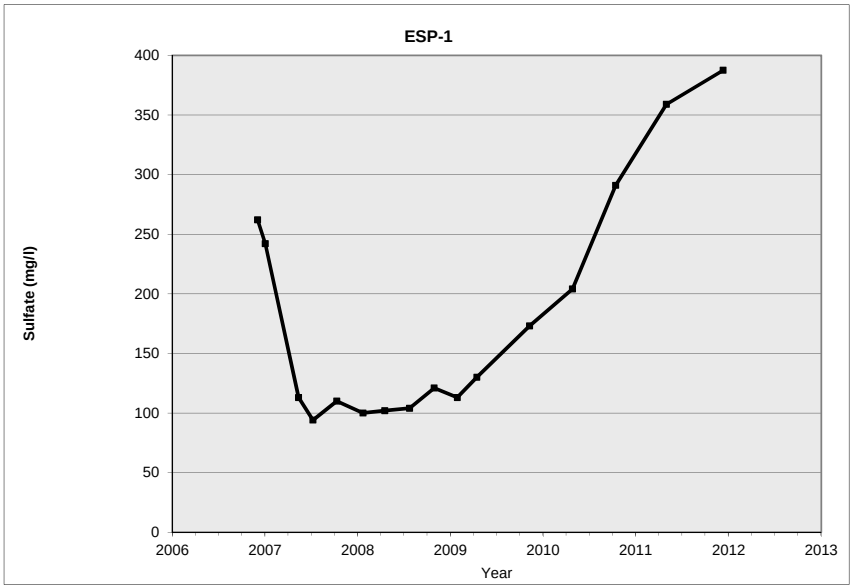
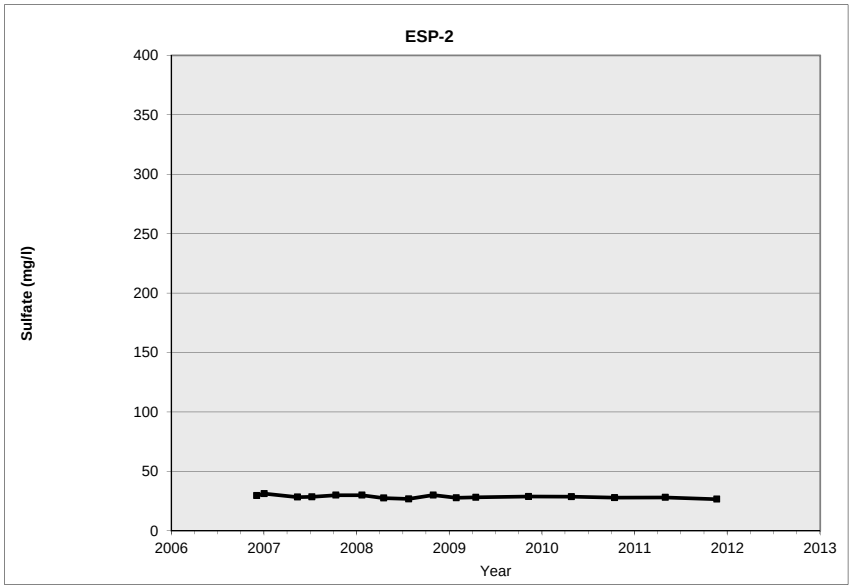
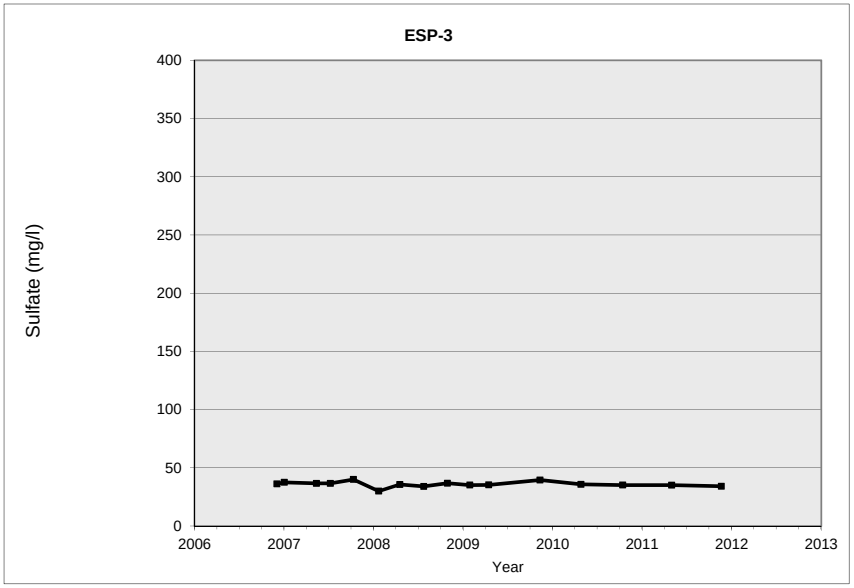


FIGURE C.6
SULFATE CONCENTRATION OVER TIME FOR WELLS
ESP-1, ESP-2, AND ESP-3

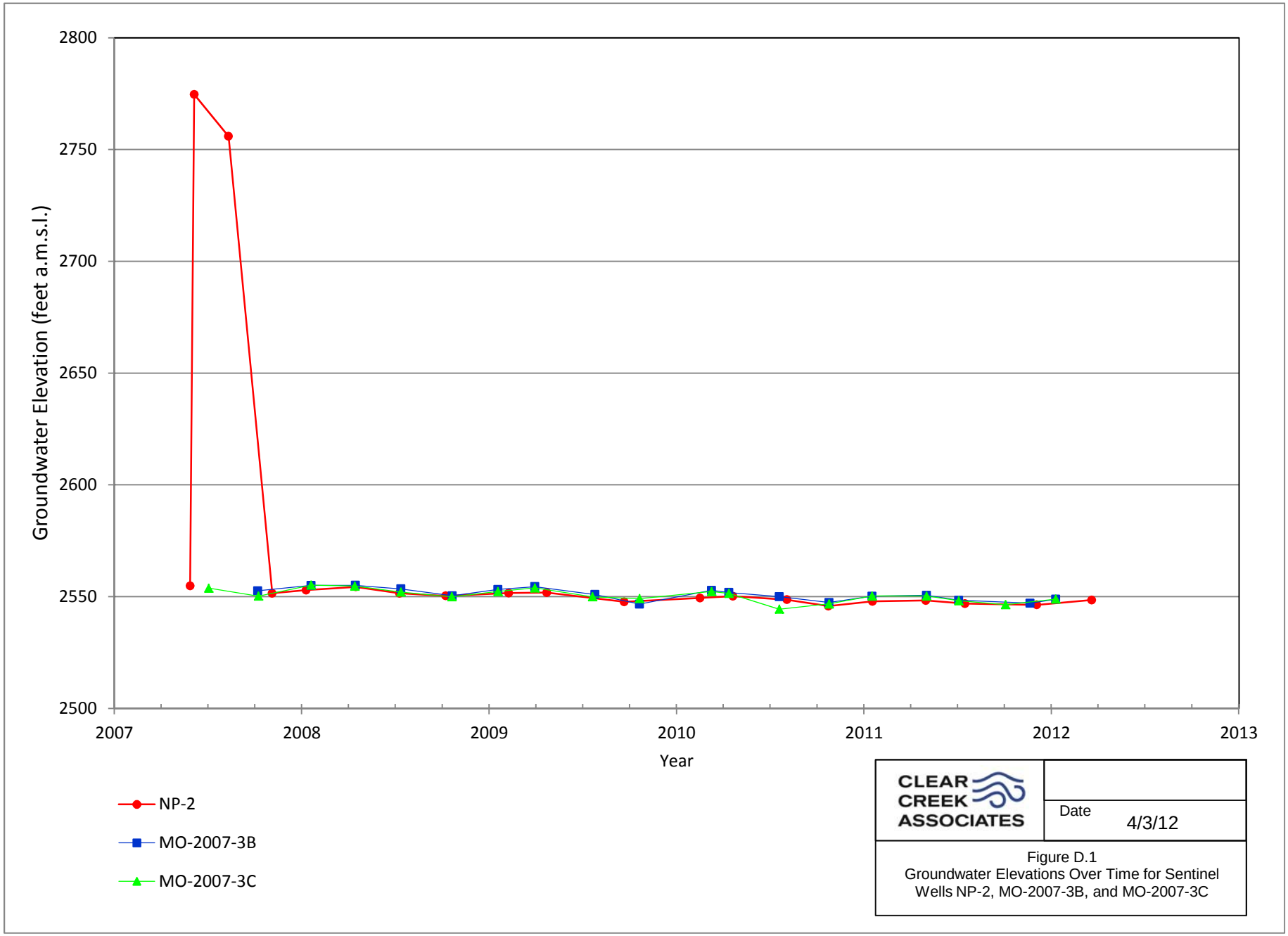






APPENDIX D

TIME SERIES GRAPHS OF GROUNDWATER ELEVATION



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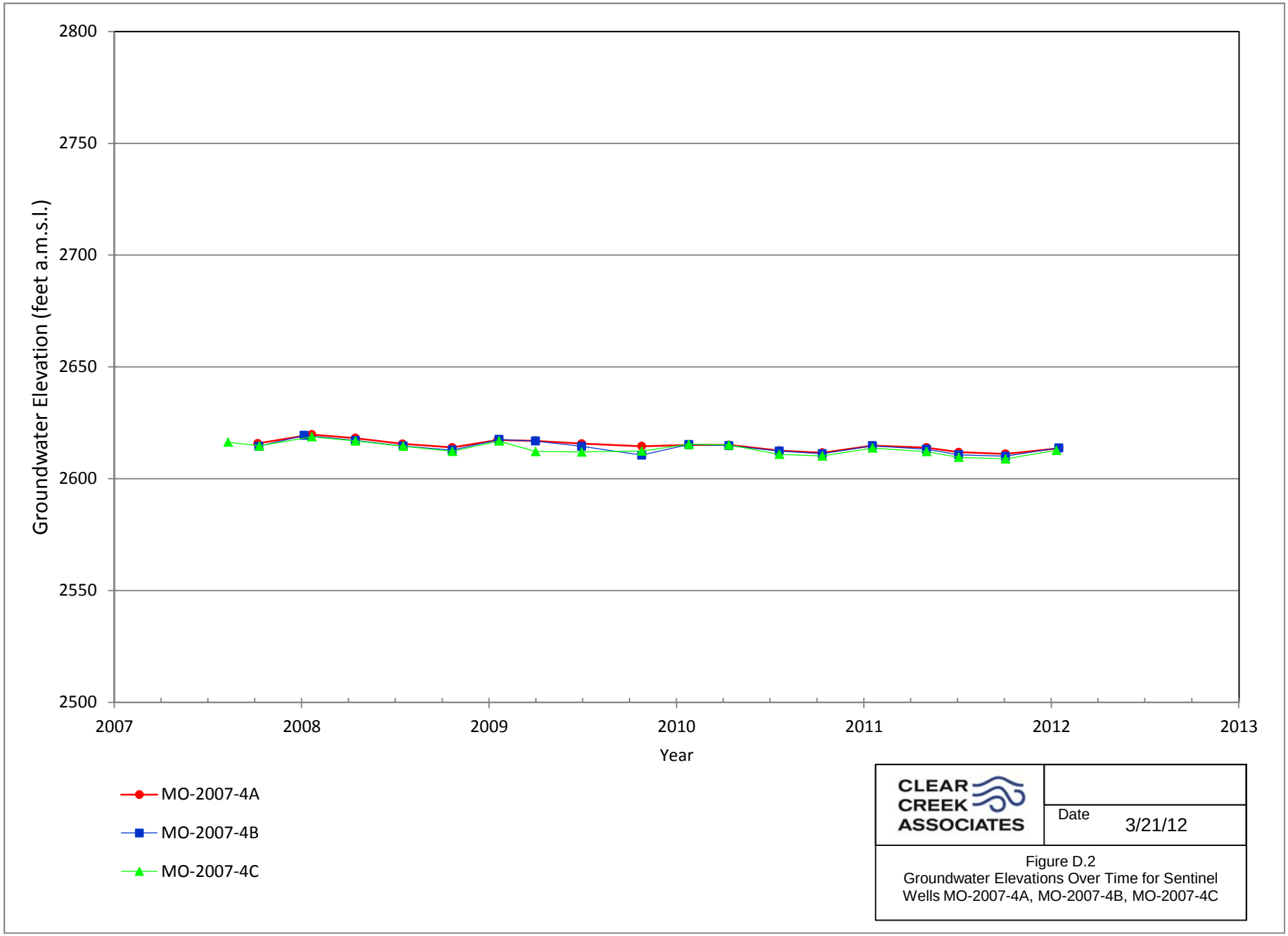

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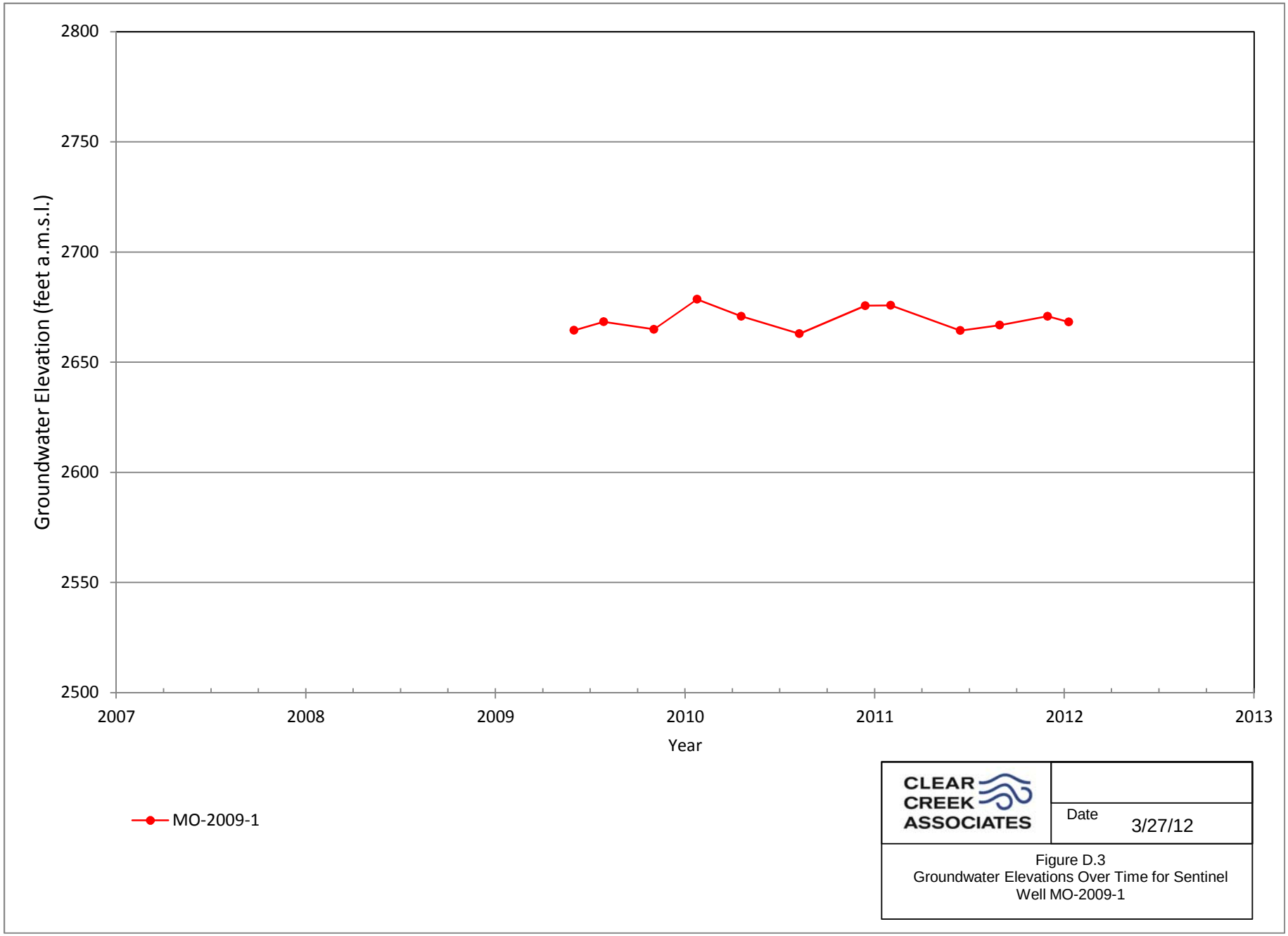
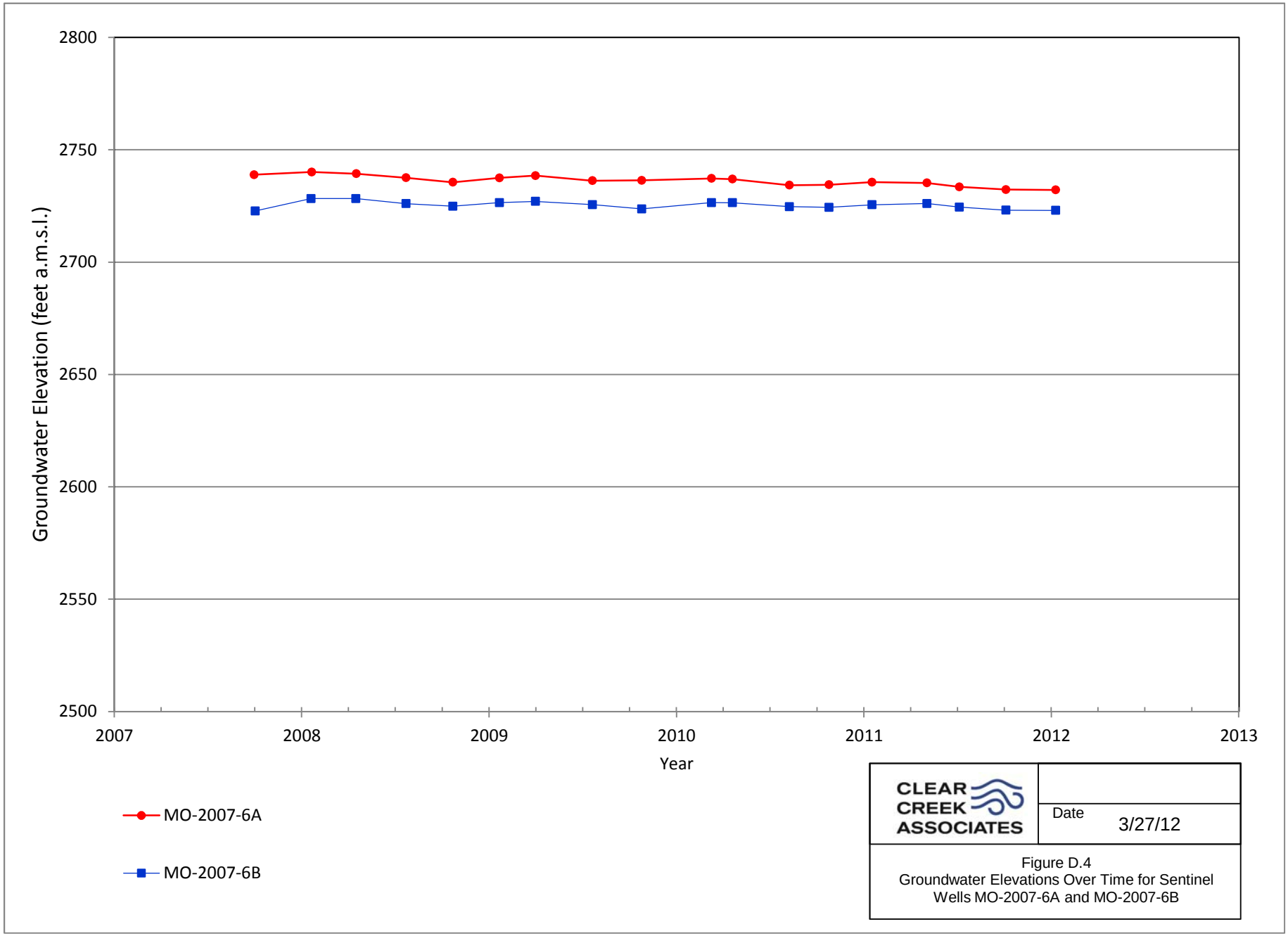


CLEAR CREEK ASSOCIATES

Date 3/27/12

Figure D.3
Groundwater Elevations Over Time for Sentinel Well MO-2009-1

V:\Projects\G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2011 Q4 and 2012 Q1 Semiannual Report\GW Elevation Time Series for Sentinel Wells



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