



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

October 29, 2013

Via Certified Mail # 7011 1150 0000 0283 7983
Return Receipt Requested

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

**Re: Semiannual Groundwater Monitoring Report for
Samples Collected During the Second & Third
Quarters 2013. 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 Second and Third Quarters 2013, prepared by Clear Creek Associates for Freeport-McMoRan Sierrita Inc. (Sierrita). This document provides results of groundwater monitoring conducted during the Second and third quarters of 2013, as agreed upon and described in the letter from ADEQ to Sierrita dated April 17, 2009.

Please do not hesitate to contact me at (520) 393-2252 if you have any questions regarding this submittal.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kanyembo Katapa'.

Kanyembo Katapa, P.E.
Environmental Engineer
Freeport-McMoRan Sierrita Inc.

KK/ms
Attachment
20131029_001

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

**SEMIANNUAL GROUNDWATER MONITORING REPORT
FOR SAMPLES COLLECTED DURING THE SECOND AND
THIRD QUARTERS 2013**

**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:

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October 21, 2013

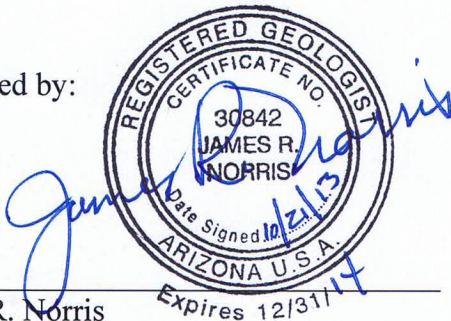
**SEMIANNUAL GROUNDWATER MONITORING REPORT
FOR SAMPLES COLLECTED DURING SECOND AND THIRD
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**MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06
PIMA COUNTY, ARIZONA**

Prepared for:

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

Approved by:



James R. Norris
Arizona Registered Geologist No. 30842

October 21, 2013

TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1	Scope of Groundwater Monitoring	1
2.	GROUNDWATER MONITORING	3
2.1	Monitoring Results.....	3
2.2	Quality Assurance/Quality Control Review	4
3.	FINDINGS	5
4.	REFERENCES	7

TABLES

1	Sampling Schedule for Pre-Implementation Groundwater Monitoring
2	Compilation of Analytical Results for Groundwater Monitoring
3	Compilation of Groundwater Elevation Data

FIGURES

1	Sampling Locations for Pre-Implementation Groundwater Monitoring
2	Sulfate Concentrations in Groundwater Second Quarter 2013
3	Sulfate Concentrations in Groundwater Third Quarter 2013
4	Groundwater Elevations Second Quarter 2013
5	Groundwater Elevations Third Quarter 2013

APPENDICES

A	Data Verification Report
B	Analytical Data Reports
C	Time Series Graphs of Sulfate Concentration
D	Time Series Graphs of Groundwater Elevation

1. INTRODUCTION

This report provides the results of groundwater monitoring conducted in the second and third quarters 2013 in the vicinity of the Freeport-McMoRan Sierrita Inc. (Sierrita) Tailing Impoundment (STI). Monitoring was conducted by Sierrita to characterize groundwater sulfate concentrations and groundwater elevations in the vicinity of the STI. This semiannual groundwater monitoring report was prepared by Clear Creek Associates on behalf of Sierrita.

1.1 Scope of Groundwater Monitoring

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

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

The details of the pre-implementation groundwater monitoring are described 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.

Four groundwater extraction wells, IW-25, IW-26, IW-27, and IW-28, were installed along the southern portion of the STI (Figure 1) in 2010. These wells began pumping in April 2012 and were added to the annual groundwater monitoring schedule (Table 1) pursuant to Task 2.2 of the Work Plan.

2. GROUNDWATER MONITORING

2.1 Monitoring Results

All wells were sampled according to the schedule presented in the pre-implementation groundwater monitoring plan (Table 1) except ESP-1, I-10, and IW-27 which were not operational during the second quarter 2013. Water level measurements were collected according to Table 1 except: HAVEN GOLF, which does not have a sounding tube; IW-27, which was not visited because it offline; and MH-1, which could not be located.

Analytical results and groundwater elevation data for the second and third quarters 2013 are tabulated in Tables 2 and 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the second quarter 2013. Figure 3 shows the dissolved sulfate concentrations in drinking water supply wells in the vicinity of the plume and their corresponding sentinel wells in the third quarter 2013. The highest sulfate concentration measured at co-located wells was used for concentration contouring¹. Sulfate concentrations are reported as received from the laboratory with no modifications to the number of significant figures. Groundwater elevations in the second and third quarters 2013 are presented on Figures 4 and 5, respectively. Groundwater elevations were calculated using depth to water measurements taken under non-pumping conditions whenever possible. Third quarter 2013 groundwater elevation data are too sparse for contouring; however, the groundwater elevations are consistent with second quarter 2013 and historical data. Figures 2 through 5 show only the most recent data for wells at which multiple measurements were made during the sampling period. Tables 2 and 3 report all measurements during the sampling period.

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 distances 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 calculated distances are 1,520 feet for second quarter 2013 and 1,620 feet for third quarter 2013. The distance migrated was calculated based on groundwater velocity of 405 feet per year determined using an average hydraulic gradient of 0.00895 between MO-2007-1C and TMM-1, a hydraulic conductivity of 31 feet per day, and an assumed effective porosity of 25 percent. The distance is considered a maximum because groundwater velocity was calculated with the highest measured hydraulic gradients between the MO-2007-1 wells and TMM-1 and the highest hydraulic conductivity measured at the MO-2007-1 wells.

2.2 Quality Assurance/Quality Control Review

Pursuant to Section 6.4 of the QAPP, a data verification report was prepared for quality assurance and quality control purposes. The data verification report reviews groundwater data collected by Sierrita during the second and third quarters 2013, and is included as Appendix A. Analytical laboratory reports for samples collected in second and third quarters 2013 are provided in portable document format on the compact diskette in Appendix B. As determined by the analytical data verification review, all data are of acceptable quality for use in the groundwater monitoring program conducted pursuant to the Mitigation Order.

3. FINDINGS

This semiannual data report provides the results of groundwater monitoring conducted in the vicinity of the STI for the second and third quarters 2013. Groundwater samples were collected from 71 plume area wells and depth to water measurements were collected from 90 wells during the second quarter 2013. In the third quarter 2013, groundwater samples and depth to water measurements were collected from 14 plume area wells.

- 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 east of co-located wells CW-3/MO-2007-5. The plume then extends north from wells CW-3/MO-2007-5 to the west of wells NP-2/MO-2007-3 and north to well TMM-1 (Figures 2 and 3). Comparison of the second quarter 2013 and the third quarter 2013 sulfate concentration data with those collected in previous quarters indicates that there has not been any significant change to the overall plume geometry, although some northward migration of the plume is interpreted in the vicinity of the MO-2007-1 wells.
- Appendix C presents time series graphs of sulfate concentrations for drinking water supply wells in the vicinity of the edge of the plume, sentinel wells between the plume and the drinking supply wells, and other monitoring wells that document the edge of the plume. Sulfate concentrations at all drinking water supply wells are less than the interim action trigger level of 135 mg/L (HGC, 2006b). The time series graphs for water supply wells CW-9, CW-10, and GV-01- GVDWID indicate that sulfate concentrations are steady over time. Sulfate concentrations at CW-6 have an increasing trend after 2010 with a maximum sulfate concentration of 91.94 mg/L in the second quarter 2013. The time series graph for GV-02-GVDWID indicates that sulfate concentrations declined starting in the first quarter 2011 and are relatively stable since the first quarter of 2013.
- Sulfate concentrations reported for groundwater samples collected from sentinel wells are less than the 135 mg/L trigger level for more frequent monitoring at sentinel wells (Sierrita, 2009a). Since 2007, concentrations are steady over time at MO-2007-3B, MO-2007-4A, MO-2007-4B, and MO-2007-6A; decrease at MO-2007-3C and MO-2007-6B; and increase at NP-2, MO-2007-4C, and MO-2009-1. The samples collected from MO-2007-3B, MO-2007-4A, MO-2007-4B, and MO-2007-4C during this monitoring period appear to be anomalously low and were not considered in characterizing the trend.
- Data presented in the time series graphs indicate that sulfate concentrations increased in wells MO-2007-1B and MO-2007-1C along the north edge of the plume. The sulfate concentrations in ESP-1, 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. ESP-1 was not sampled in the third quarter 2013 because the well is not

operational. The apparent decline in concentration for the last sample at MO-2007-1B needs to be verified by future sampling.

- Appendix D presents time series graphs of groundwater elevation at the sentinel wells. The time series graphs show that water levels at MO-2007-3B, MO-2007-3C, MO-2007-4A, MO-2007-4B, MO-2007-4C, and NP-2 are relatively steady over time; and water levels at MO-2007-6A, MO-2007-6B, and MO-2009-1 have been decreasing since second quarter 2012. Groundwater elevations for the sentinel wells are typically slightly higher in the first and second quarters than during the third and fourth quarters. The June 2007 and August 2007 water levels at NP-2 and the October 2012 water level at MO-2007-3B appear to be anomalous and are not used for trend analysis.

4. REFERENCES

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

TABLES

TABLE 1
Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Quarterly Sampling First Quarter	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth 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	Quarterly Sampling First Quarter	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter
IW-21	545564	Sierrita		✓		
IW-22	200554	Sierrita		✓		
IW-23	200555	Sierrita		✓		
IW-24	200556	Sierrita		✓		
IW-25	219596	Sierrita		✓		
IW-26	219143	Sierrita		✓		
IW-27	219136	Sierrita		✓		
IW-28	219137	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		✓		✓

TABLE 1
Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Quarterly Sampling First Quarter	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter
MH-29	903649	Sierrita		✓		✓
MH-30	903884	Sierrita		✓		
MO-2007-1A	907342	Sierrita		✓		✓
MO-2007-1B	907210	Sierrita		✓		✓
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
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
CC OF GV	501760	1/15/07	7.31	23.0	767	133
		4/16/07	7.44	22.6	767	133
		7/9/07	7.58	24.5	658	104
		1/10/08	7.27	22.5	689	143
		4/16/08	7.37	25.2	426	69.4
		7/7/08	6.97	23.7	736	119
		10/9/08	7.26	24.8	476	72.4
		2/4/09	8.08	13.8	399	107
		4/21/09	6.92	19.8	526	90.1
		4/22/10	6.99	21.26	929	95
		4/21/11	6.95	17.6	494	82
		6/26/12	7.13	27.7	565	88.69
CW-3	627483	5/14/13	7.46	23.3	706	147.80
		6/6/07	7.74	25.3	449	57.9
		8/10/07	7.40	25.9	444	59.5
		1/11/08	7.55	25.1	432	55.7
		4/17/08	7.32	25.6	398	54.1
		7/11/08	7.53	25.7	484	56.7
		10/6/08	7.50	25.3	430	56.2
		2/9/09	7.68	24.3	347	54.3
		4/24/09	6.75	25.4	520	56.2
		12/31/09	7.57	23.8	419	56.2
		4/22/10	7.32	23.03	475	57.7
		10/25/10	7.60	25.5	460	57.6
		5/2/11	7.55	26.4	390	56.8
		12/5/11	7.79	22.7	437	55.18
		6/18/12	7.57	28.4	517	61.70
		12/13/12	7.64	24.1	473	63.84
CW-6	627485	12/13/12 DUP	7.64	24.1	473	64.04
		6/13/13	7.63	24.4	444	70.8
		12/4/06	NM	NM	NM	46.2
		1/3/07	7.73	26.8	418	49.2
		1/3/07	7.73	26.8	418	49.5
		5/14/07	7.58	26.1	507	68.7
		7/10/07	7.60	26.9	475	57.6
		7/10/07	7.60	26.9	475	58
		1/8/08	7.64	27.1	368	48.9
		4/15/08	7.25	26.9	382	51.2
		7/8/08	7.43	27.2	416	47.9
		10/7/08	7.52	26.6	431	51.5
		10/7/08 DUP	7.52	26.6	431	51.5
		2/6/09	7.87	26.6	317	48.2
		4/22/09	7.62	25.3	377	47.9
		4/22/09 DUP	7.62	25.3	377	47.3
		9/17/09	7.18	24.8	478	70
		11/5/09	7.52	25.1	434	59.7
		2/10/10	7.68	24.4	369	46.6
		5/14/10	7.70	26.50	380	52.1
		7/27/10	7.50	27.5	444	55.2
		10/14/10	7.67	26.2	429	52.5
		2/24/11	7.57	23.4	455	70.3
		4/28/11	7.66	25.2	453	58.1
		7/20/11	7.52	25.5	417	81
		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
		5/9/12	7.70	26.5	489	80.99
		8/29/12	7.44	25.2	537	82.24
		12/12/12	7.47	23.6	541	82.98
		2/6/13	7.32	24.0	457	76.54
		5/15/13	7.63	24.7	513	91.94
		7/17/13	7.47	25.3	500	91.6
CW-7	502546	1/3/07	7.38	27.4	1799	807
		5/14/07	7.40	27.4	1860	874
		7/10/07	7.32	27.4	1945	860
		1/8/08	7.26	27.3	1860	1080
		4/15/08	7.31	27.6	1758	900
		7/8/08	7.11	27.9	2037	890
		7/8/08 DUP	7.11	27.9	2037	910

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
CW-8	543600	1/24/07	7.67	29.7	1232	449
		5/14/07	7.69	29.4	1379	529
		7/10/07	7.63	29.8	1401	500
		1/8/08	7.59	7.6	1160	466
		4/15/08	7.54	29.5	1135	441
		7/8/08	7.40	29.8	1373	504
CW-9	588121	12/4/06	NM	NM	NM	44.5
		1/3/07	7.74	27.0	387	44.9
		5/14/07	7.74	27.5	414	47.8
		7/10/07	7.68	22.6	414	46.7
		1/8/08	7.55	27.3	356	47.3
		4/15/08	7.39	27.4	347	43.7
		7/8/08	7.26	27.9	396	44.1
		10/7/08	7.50	27.7	395	43.5
		2/6/09	7.79	26.8	300	45.1
		4/22/09	7.81	26.3	361	44.3
		7/30/09	7.57	28.3	379	43.8
		11/5/09	6.82	27.4	376	44.7
		2/10/10	7.55	26.0	351	43.4
		5/14/10	7.62	28.1	345	44.2
		7/27/10	7.58	28.4	390	44.1
		10/14/10	7.72	27.5	389	44.2
		2/24/11	7.75	26.3	347	42.7
		4/28/11	7.68	28.8	377	44.4
		7/20/11	7.71	27.8	379	43.9
		12/14/11	7.69	26.5	373	43.80
		1/24/12	7.70	25.1	262	45.60
		5/9/12	7.67	28.3	356	44.39
		8/29/12	7.62	27.9	372	43.94
		12/12/12	7.75	26.6	382	42.14
		2/6/13	7.43	26.7	325	39.87
		5/15/13	7.70	27.0	367	45.78
		7/17/13	7.66	28.1	374	43.7
CW-10	207982	12/4/06	NM	NM	NM	37.2
		1/24/07	7.90	30.2	385	48.6
		5/14/07	7.81	31.3	392	52.8
		7/10/07	7.82	31.3	403	51.7
		1/8/08	7.79	28.2	334	45.3
		4/15/08	7.51	30.6	339	50.8
		7/8/08	7.34	31.2	385	50.5
		10/7/08	7.59	30.5	380	48.3
		2/6/09	7.91	29.8	295	51.3
		4/22/09	7.71	29.2	349	47.9
		7/30/09	7.60	31.5	375	49.2
		7/30/09 DUP	7.60	31.5	375	49.4
		11/5/09	7.60	29.7	364	49.9
		2/10/10	7.69	28.4	346	44.9
		5/14/10	7.79	30.7	349	49.1
		7/27/10	7.69	31.4	380	48.9
		10/14/10	7.74	30.2	377	48.5
		2/24/11	7.83	29.3	346	50.2
		2/24/11 DUP	7.83	29.3	346	50.2
		4/28/11	7.54	27.9	372	49.6
		7/20/11	7.72	31.4	383	50.7
		12/14/11	7.81	29.8	370	49.24
		1/24/12	7.77	28.7	265	52.32
		5/9/12	7.85	30.9	354	52.51
		8/29/12	7.74	31.4	369	50.95
		12/12/12	7.77	29.3	392	52.33
		2/6/13	7.52	29.3	332	47.91
		5/15/13	7.85	30.6	365	52.35
		5/15/13 DUP	7.85	30.6	365	52.77
		7/17/13	8.12	31.5	353	54.8

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
ESP-1	623102	12/4/06	NM	NM	NM	262
		1/3/07	7.65	28.0	869	242
		5/14/07	7.70	28.7	592	113
		7/10/07	7.66	28.8	584	94
		1/23/08	7.73	27.6	492	100
		4/18/08	7.61	29.6	474	102
		7/25/08	7.52	28.4	561	104
		10/30/08	7.55	26.9	576	121
		1/29/09	7.44	25.2	491	113
		4/16/09	7.72	25.4	541	130
		11/10/09	7.45	26.8	649	173
		4/28/10	7.49	28.7	639	204
		10/15/10	7.49	27.7	953	291
		5/3/11	7.51	28.1	1060	359
		12/13/11	7.49	26.1	1046	387.52
		6/19/12	7.43	30.4	1221	395.72
ESP-2	623103	12/4/06	NM	NM	NM	29.6
		1/3/07	7.82	28.4	377	31.3
		5/14/07	7.86	27.8	368	28.4
		7/10/07	7.73	28.9	380	28.6
		1/23/08	7.85	25.8	366	30
		4/18/08	7.80	27.3	325	27.6
		7/25/08	7.65	28.6	361	26.8
		10/30/08	7.22	27.5	374	30.1
		10/30/08 DUP	7.22	27.5	374	30
		1/29/09	6.38	25.4	317	27.8
		4/16/09	7.55	24.0	307	28.2
		11/10/09	7.58	27.0	343	28.9
		4/28/10	7.67	27.9	324	28.7
		10/15/10	7.78	27.6	355	27.9
		10/15/10 DUP	7.78	27.6	355	27.8
		5/3/11	7.72	27.8	361	28.1
		5/3/11 DUP	7.72	27.8	361	28.1
		11/22/11	7.84	26.0	350	26.65
		6/19/12	7.65	31.7	387	27.75
		11/21/12	7.55	28.8	333	26.79
		5/20/13	7.70	28.2	350	27.86
ESP-3	623104	12/4/06	NM	NM	NM	36.2
		1/3/07	7.83	27.8	393	37.5
		5/14/07	7.78	28.8	374	36.6
		5/14/07	7.78	28.8	374	36.6
		7/10/07	7.84	29.2	378	36.6
		1/23/08	7.99	26.1	373	30
		4/18/08	7.82	27.8	322	35.7
		7/25/08	7.70	28.2	358	34
		10/30/08	7.58	27.8	375	36.8
		1/29/09	7.73	23.9	327	35.2
		4/16/09	7.62	26.1	327	35.3
		11/12/09	7.71	27.0	354	39.5
		4/28/10	7.77	25.8	326	35.8
		10/15/10	7.76	27.5	356	35.2
		5/3/11	7.82	27.2	362	35.1
		11/22/11	7.95	27.6	337	34.18
		6/19/12	7.87	30.6	390	34.98
		11/21/12	7.59	28.4	327	35.4
		5/22/13	7.71	26.7	368	35.87
ESP-4	623105	3/20/07	7.67	26.7	1187	393
		6/4/07	7.45	28.4	733	385
		7/24/07	7.34	28.4	918	410
		7/24/07	7.34	28.4	918	420
		1/23/08	7.83	24.4	787	520
		4/18/08	7.71	27.2	821	462
		7/25/08	7.52	28.6	1096	420
		10/30/08	7.23	25.9	962	489
		1/29/09	7.52	24.7	950	522
		4/16/09	7.30	25.4	873	521
		10/23/09	7.41	27.8	954	485
		4/28/10	7.37	26.7	936	558
		4/28/10 DUP	7.37	26.7	936	520
		10/15/10	7.41	27.9	1356	539
		5/3/11	7.54	27.1	1465	595
		11/12/12	7.60	26.3	1337	618.5
		5/20/13	7.46	28.5	1173	581.6

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
GV-01-GVDWID	603428	8/6/06	NM	NM	NM	41.2
		1/9/07	8.00	25.8	424	40.9
		4/10/07	7.69	27.2	421	43.2
		7/11/07	7.64	26.8	447	41.5
		1/7/08	7.49	25.7	422	45.7
		4/16/08	7.29	25.8	399	44.1
		7/7/08	7.14	26.1	466	45.2
		10/9/08	7.25	26.6	414	39
		2/4/09	7.50	26.4	338	42.3
		4/22/09	7.05	27.8	380	40.6
		7/29/09	7.17	24.6	606	44.3
		11/4/09	7.45	25.1	415	45.1
		1/27/10	7.54	24.5	411	47.0
		4/1/10	7.49	24.6	420	48.5
		7/28/10	7.20	28.1	348	39.4
		10/14/10	7.29	26.4	411	38.4
		1/20/11	7.04	23.0	408	40.0
		4/28/11	7.30	27.5	421	42.9
		7/20/11	6.88	27.1	429	39.6
		12/7/11	7.68	25.4	416	39.31
		3/14/12	7.61	26.0	406	35.56
		6/7/12	7.21	26.9	420	37.87
		8/29/12	7.38	27.6	409	36.15
		11/15/12	7.27	23.9	450	33.95
		1/29/13	7.34	24.9	373	38.61
		5/16/13	7.64	26.8	398	38.80
		7/11/13	7.79	26.4	367	42.60
		7/11/13 DUP	7.79	26.4	367	42.5
GV-02-GVDWID	603429	8/6/06	NM	NM	NM	48.6
		10/4/06	NM	NM	NM	95.3
		1/9/07	7.68	23.6	626	103
		4/10/07	7.60	24.1	479	106
		7/11/07	7.50	24.0	649	98
		1/7/08	7.32	23.3	611	98
		4/16/08	7.28	23.7	553	97
		7/7/08	7.12	23.8	642	93.2
		10/9/08	7.18	24.2	599	93.5
		2/4/09	7.36	23.9	489	98.8
		4/22/09	6.67	26.5	485	79.5
		7/29/09	7.02	26.4	427	91.6
		11/4/09	7.25	24.3	547	93.2
		1/27/10	7.47	22.0	547	94.9
		1/27/10 DUP	7.47	22.0	547	94.5
		4/1/10	7.33	22.9	555	99.5
		7/28/10	7.23	24.6	650	83
		10/14/10	7.36	24.5	629	90.7
		1/20/11	7.37	23.1	611	92.7
		4/28/11	7.43	24.5	612	87.3
		7/20/11	7.35	24.0	624	87.2
		12/7/11	7.53	21.8	578	77.88
		3/14/12	7.37	23.8	566	77.35
		6/7/12	7.14	24.0	559	71.78
		8/29/12	7.49	26.3	495	62.98
		8/29/12 DUP	7.49	26.3	495	63.26
		11/15/12	7.55	23.4	543	63.97
		1/29/13	7.35	22.7	457	61.02
		1/29/13 DUP	7.35	22.7	457	61.23
		5/16/13	7.54	24.4	482	63.14
		7/11/13	7.72	24.4	423	64.20
GV-SI-GVDWID	208825	10/4/06	NM	NM	NM	5.9
		1/9/07	7.90	26.7	358	5.7
		4/10/07	7.48	26.8	367	6.6
		7/11/07	7.59	27.1	389	6.9
		1/7/08	7.00	26.6	342	8
		4/16/08	7.27	26.4	331	2
		7/7/08	7.18	27.2	382	<0.5
		10/9/08	7.44	26.7	352	5.4
		2/4/09	7.56	27.3	290	6.2
		4/22/09	6.95	28.0	330	5.6
		4/1/10	7.55	26.1	339	6.9
		4/28/11	7.57	27.1	364	6.0
		6/20/12	7.33	28.5	367	8.46
		5/16/13	7.55	26.6	359	6.10

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
HAVEN GOLF	515867	2/6/07	7.28	23.0	683	107
		4/16/07	7.26	23.3	655	105
		7/9/07	7.57	32.8	622	80.1
		1/7/08	7.18	21.0	610	99
		4/15/08	7.34	24.8	629	106
		7/7/08	6.93	23.9	727	112
		10/7/08	7.31	27.8	588	92.3
		2/4/09	7.33	23.7	554	120
		2/4/09 DUP	7.33	23.7	554	119
		4/21/09	7.40	23.6	306	109
		4/22/10	6.85	20.8	726	109
		4/21/11	7.10	20.4	588	95
		5/29/12	6.41	279.0	633	88.05
		5/7/13	7.46	23.5	537	105.13
I-10	608525	4/16/07	7.17	28.8	878	533
		7/11/07	7.13	31.3	1013	550
		1/8/08	7.46	24.6	1164	520
		4/14/08	7.29	29.5	836	490
		7/21/08	7.19	30.9	1036	480
		10/28/08	7.18	29.7	1034	526
		1/20/09	7.13	27.6	1040	544
		5/12/09	7.15	28.0	997	495
IW-1	623129	11/15/06	NM	NM	NM	490
		1/10/07	6.97	25.1	1033	520
		4/9/07	7.24	26	918	480
		7/16/07	6.86	32.7	884	510
		1/16/08	7.38	28.5	959	610
		5/7/08	6.87	29.8	847	610
		7/23/08	6.57	29.5	1228	670
		10/24/08	7.01	30.9	1201	700
		1/27/09	6.61	23.6	1134	660
		4/20/09	7.01	29.0	1092	670
		4/12/10	6.79	29.6	1148	940
		5/11/11	7.02	27.1	2110	1050
		5/21/12	6.71	32.0	1689	900
		4/15/13	7.25	27.4	1676	980
		11/15/06	NM	NM	NM	100
IW-2A	216464	1/10/07	6.91	23.8	528	110
		4/3/07	7.08	25.3	492	90
		7/16/07	7.18	32.2	506	90
		1/16/08	7.76	28.1	470	70
		4/22/08	6.99	30.5	382	80
		7/23/08	6.88	30.3	474	60
		10/24/08	7.43	30.3	473	60
		1/27/09	7.02	25	420	53
		4/20/09	6.85	28.0	405	54
		4/12/10	7.04	NM	28.9	77
		5/11/11	7.12	26.7	541	87
		5/11/11 DUP	7.12	26.7	541	88
		5/21/12	6.89	31.1	638	121
		4/15/13	7.01	27.0	550	123
		11/15/06	NM	NM	NM	1590
IW-3A	623131	4/3/07	7.29	25.1	1374	1540
		7/16/07	6.85	29.8	1184	1500
		1/16/08	7.20	27.4	1280	1490
		4/22/08	7.03	29.3	1224	1420
		7/23/08	6.62	29.3	1789	1460
		10/27/08	6.97	28.7	1679	1450
		1/27/09	6.82	23.1	1520	1550
		1/27/09 DUP	6.82	23.1	1520	1310
		4/20/09	6.69	27.2	1448	1400
		4/12/10	6.55	27.5	1380	1500
		5/11/11	6.75	25.6	2260	1650
		6/20/12	6.51	275.0	3170	1700
		5/14/13	7.01	27.7	2660	1600

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-4	623132	1/18/07	6.81	22.4	2210	1610
		1/18/07	6.81	22.4	2210	1590
		4/11/07	6.6	28.2	1252	1600
		7/18/07	6.61	29.1	1462	1450
		1/16/08	7.00	25.2	1326	1590
		4/22/08	6.59	28.6	1264	1540
		7/23/08	6.70	31.0	1899	1640
		10/24/08	6.92	27.9	1924	1630
		1/27/09	6.58	23.9	1718	1460
		4/20/09	6.79	25.6	1604	1400
		4/12/10	6.49	26.8	1483	1600
		5/11/11	6.57	25.8	3070	1700
		5/21/12	6.57	27.5	2650	1500
IW-5A	219131	4/15/13	6.93	24.2	2750	1800
		1/16/07	7.34	23.1	1511	1710
		7/18/07	6.82	27.0	1716	1610
		1/16/08	7.11	24.1	1380	1690
		4/21/08	6.64	27.5	1326	1550
		7/23/08	6.76	30.1	1370	1730
		10/27/08	6.57	26.8	1886	1720
		1/27/09	6.44	19.5	1560	1630
		4/20/09	6.73	24.7	1635	1600
		4/12/10	6.59	25.7	1476	1800
		4/12/10 DUP	6.59	25.7	1476	1700
		4/20/11	6.78	22.2	3210	1740
		5/22/12	6.68	26.6	2880	1600
IW-6A	545565	4/15/13	6.84	24.2	2910	1760
		4/15/13 DUP	6.84	24.2	2910	1740
		11/15/06	NM	NM	NM	1760
		1/16/07	7.25	22.5	1562	1800
		4/9/07	6.69	26	1627	1830
		7/25/07	6.67	24.5	1609	1930
		1/16/08	7.21	23.1	1489	1910
		1/16/08 DUP	7.21	23.1	1489	1800
		4/21/08	7.30	25.4	1309	1920
		7/17/08	6.84	27.1	1510	1850
		10/24/08	6.61	25.5	1999	1930
		1/26/09	6.58	21.9	1959	1600
		4/20/09	6.78	25.6	1710	1700
IW-8	508236	4/12/10	6.99	34.2	1437	1800
		5/11/11	6.82	23.4	3390	1900
		5/22/12	6.61	27.3	2950	1800
		4/15/13	6.86	23.9	3030	1840
		4/3/07	7.11	24.1	1523	1760
		7/18/07	6.82	29.5	1328	1870
		1/16/08	7.30	24.3	1386	1900
		4/22/08	6.86	27.5	1301	1700
		7/23/08	6.78	27.5	1440	1870
		10/24/08	6.85	27.4	1976	1890
		1/27/09	6.38	20.4	1816	1630
		4/20/09	6.75	25.4	1620	1700
		4/12/10	6.52	25.6	1547	1900
IW-9	508239	5/11/11	6.67	23.9	1965	1900
		5/21/12	6.62	28.7	2670	1700
		5/14/13	6.96	26.9	2800	1700
		11/15/06	NM	NM	NM	1760
		1/18/07	7.40	22.6	1690	1670
		4/11/07	6.73	25.1	1424	1750
		7/18/07	6.78	29.4	1547	1810
		1/16/08	7.01	26.1	1359	1700
		4/22/08	6.86	28.5	1328	1670
		7/23/08	6.88	28.8	1420	1730
		10/24/08	6.88	28.6	1981	1720
		10/24/08 DUP	6.88	28.6	1981	1720
		1/27/09	6.69	21.7	1774	1500
IW-9	508239	4/20/09	6.79	26.9	1585	1600
		4/12/10	6.95	29.2	1579	1800
		4/12/10 DUP	6.95	29.2	1579	1800
		5/26/11	6.95	26.2	3850	1810
		5/21/12	6.58	29.2	2680	1700
		4/15/13	6.90	25.6	2880	1730

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-10	508237	11/15/06	NM	NM	NM	1650
		1/16/07	7.38	23.7	1303	1670
		4/3/07	7.11	26.7	1520	1750
		7/18/07	6.78	28.3	1734	1770
		1/16/08	7.91	24.0	537	1800
		4/21/08	6.68	27.2	1338	1470
		7/23/08	6.90	28.4	1460	1740
		10/24/08	6.77	27.0	1969	1730
		1/27/09	6.64	20.7	1560	1490
		4/20/09	6.80	24.8	1607	1600
		4/12/10	6.61	26.5	1431	1700
		5/11/11	6.67	24.3	3310	1800
		5/22/12	6.78	26.9	2890	1700
		4/15/13	6.85	23.6	2980	1740
IW-11	508235	11/21/06	NM	NM	NM	1600
		1/16/07	7.10	21.7	1516	1700
		4/9/07	6.76	26.2	1342	1760
		7/18/07	6.84	26.8	1788	1770
		1/16/08	7.15	22.3	1370	1800
		4/21/08	6.53	26	1303	1770
		4/21/08 DUP	6.53	26	1303	1850
		7/29/08	6.58	24.4	1830	1720
		10/24/08	6.89	26.3	1958	2260
		1/27/09	6.56	19.1	1540	1600
		4/20/09	6.64	25.1	1632	1600
		4/12/10	6.63	24.6	1492	1700
		5/11/11	6.51	25.0	3250	1700
		5/22/12	6.76	25.5	2810	1600
		4/15/13	6.82	23.7	2890	1730
IW-12	545555	1/16/07	6.93	22.3	1444	1620
		4/17/07	6.56	25.9	1345	1630
		7/25/07	6.55	25.2	1483	1700
		1/16/08	6.87	23.4	1428	1700
		1/16/08 DUP	6.87	23.4	1428	1700
		4/11/08	6.51	27.4	1426	1580
		7/17/08	6.76	28.4	1917	1630
		10/24/08	6.81	26.5	1879	1520
		1/26/09	6.70	23.7	1792	1440
		4/20/09	6.63	26.5	1576	1500
		4/12/10	6.70	22.8	1579	1500
		5/11/11	6.74	25.8	3120	1700
		5/22/12	6.66	27.7	2640	1600
		5/14/13	6.92	27.2	2540	1500
		4/17/07	6.81	25.8	1430	1690
IW-13	545556	7/25/07	6.61	25.1	1560	1940
		7/25/07	6.61	25.1	1560	1780
		1/16/08	6.64	24.0	1599	1800
		4/11/08	6.61	26.8	1502	1800
		7/17/08	6.6	30	1898	1850
		10/24/08	6.70	26.1	1999	1930
		1/26/09	6.49	23.6	1951	1600
		4/20/09	6.73	27.2	1697	1700
		4/12/10	6.64	24.1	1669	1900
		5/11/11	6.70	25.3	3360	1900
		6/20/12	6.67	25.9	3450	1900
		4/15/13	6.73	24.9	3030	1760
		4/17/07	6.81	25.8	1430	1690
IW-14	545557	11/15/06	NM	NM	NM	1820
		1/16/07	6.72	22.4	1484	1790
		1/16/07	6.72	22.4	1484	1810
		4/16/07	6.63	24.4	1383	1790
		7/25/07	6.51	24.7	1462	1910
		1/16/08	7.03	23.2	1646	1800
		4/11/08	6.49	26.8	1460	1810
		7/16/08	6.59	29.9	1901	1870
		10/24/08	6.51	26.4	1929	1840
		1/26/09	6.52	23	1869	1600
		4/20/09	6.66	27.1	1612	1700
		4/21/10	6.89	24.8	1428	1900
		5/11/11	7.54	25.7	3460	1900
		5/22/12	6.48	31.8	2620	1800
		4/15/13	6.91	24.4	3020	1870

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-15	545558	11/15/06	NM	NM	NM	1710
		1/16/07	7.04	23.9	1420	1730
		4/16/07	6.82	27.4	1314	1740
		7/25/07	6.32	26.6	1388	1760
		1/16/08	7.07	22.3	1561	1740
		4/11/08	6.42	28.3	1395	1670
		7/15/08	6.75	31.3	1790	1730
		10/24/08	6.6	26.0	1892	1850
		1/27/09	6.86	21.8	1935	1630
		4/20/09	7.71	28.5	1302	1600
		4/20/09 DUP	7.71	28.5	1302	1700
		4/12/10	6.69	25.0	1669	1700
		5/11/11	7.54	26.2	3270	1800
		5/11/11 DUP	7.54	26.2	3270	1800
		5/22/12	6.74	29.4	2850	1800
		5/14/13	7.03	27.1	2770	1700
IW-16	545559	11/15/06	NM	NM	NM	1730
		1/16/07	7.18	23.8	1415	1730
		4/17/07	6.86	26.8	1320	1770
		4/17/07	6.86	26.8	1320	1790
		7/25/07	6.63	26.5	1368	1800
		1/16/08	7.07	23.3	1561	1740
		4/11/08	6.64	26.4	1404	1770
		7/15/08	6.52	31.2	1778	1840
		10/24/08	6.35	25.7	1879	1850
		1/26/09	6.44	23.9	1773	1620
		4/20/09	6.69	27.1	1347	1700
		4/12/10	6.79	25.6	1652	1800
IW-17	545560	11/15/06	NM	NM	NM	1570
		1/16/07	6.79	21.8	1402	1600
		4/16/07	6.90	26.3	1303	1670
		7/25/07	6.61	27.2	1348	1730
		1/16/08	6.74	16.5	1485	1720
		4/11/08	6.49	28.5	1398	1730
		7/15/08	6.63	31.7	1853	1770
		10/24/08	6.70	27.0	1864	1720
		1/26/09	6.41	24.1	1828	1480
		4/20/09	6.77	30.1	1332	1600
		4/12/10	6.63	26.5	1604	1700
IW-18	545561	11/21/06	NM	NM	NM	1610
		1/18/07	7.26	15.4	1460	1660
		4/16/07	6.80	24.9	1161	1610
		7/25/07	6.45	28.1	1293	1760
		1/14/08	6.39	21.9	1899	1700
		4/11/08	6.61	27.5	1388	1540
		7/15/08	6.71	30.2	1847	1710
		10/24/08	6.34	27.1	1883	1680
		1/26/09	6.39	24.7	1779	1460
		4/20/09	6.77	29.9	1337	1700
		4/29/10	6.63	23.7	1455	1600
IW-19	545562	11/21/06	NM	NM	NM	1570
		1/11/07	7.19	25.1	1802	1630
		4/16/07	6.69	26.7	1296	1630
		7/25/07	6.91	26.3	1310	1650
		1/10/08	6.39	22.4	1881	1800
		1/10/08 DUP	6.39	22.4	1881	1800
		4/11/08	6.62	26.3	1409	1680
		7/15/08	6.78	29.4	1807	1670
		10/24/08	6.6	28.7	1685	1710
		1/26/09	6.47	24.3	1852	1370
		4/20/09	6.82	27.9	1366	1600
		4/12/10	6.62	26.4	1570	1600
		5/11/11	6.68	26.6	3200	1700
		5/22/12	6.56	30.7	2730	1300
		5/14/13	6.85	28.7	2690	1600

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-20	545563	11/21/06	NM	NM	NM	1550
		1/11/07	7.23	26.4	2360	1630
		4/9/07	7.07	27.2	1260	1500
		7/24/07	6.69	30.8	1822	1580
		1/9/08	6.72	26.4	1710	1700
		4/11/08	6.74	27.3	1400	1560
		7/15/08	6.6	29.4	1650	1640
		10/24/08	6.81	28.6	1779	1600
		1/26/09	6.48	24.1	1837	1450
		4/20/09	6.76	30.0	1375	1500
		4/29/10	6.62	24.2	1417	1600
		5/11/11	7.07	26.3	3080	1600
		6/20/12	6.67	28.2	3080	1600
		6/17/13	7.21	31.1	1785	1900
IW-21	545564	6/17/13 DUP	7.21	31.1	1785	1800
		11/21/06	NM	NM	NM	1580
		1/11/07	7.15	27.8	1848	1620
		4/17/07	6.85	29.4	1424	1650
		7/24/07	6.68	30.6	1828	1630
		1/9/08	6.33	25.4	1975	1800
		4/11/08	6.85	24.6	1375	1610
		4/11/08 DUP	6.85	24.6	1375	1610
		7/29/08	6.49	29	1780	1670
		10/24/08	6.91	29.7	1833	1640
		1/26/09	6.59	25.7	1410	1390
		4/20/09	6.83	30.7	1422	1600
		4/12/10	6.72	28.1	1621	1700
		5/11/11	6.77	29.6	3140	1700
IW-22	200554	6/20/12	6.65	29.2	3130	1700
		4/15/13	6.94	28.8	2840	1690
		11/21/06	NM	NM	NM	1710
		1/23/07	6.90	22.1	1253	1660
		4/9/07	7.09	26	1325	1740
		7/18/07	6.99	28.1	1683	1790
		1/16/08	7.19	23.1	1378	1700
		4/21/08	6.53	28.7	1362	1760
		4/21/08 DUP	6.53	28.7	1362	1410
		7/23/08	6.86	28.9	1370	1760
		10/24/08	6.89	26.4	1929	1720
		1/27/09	6.58	19.9	1570	1610
		4/20/09	6.77	25.5	1635	1700
		4/12/10	6.59	25.4	1472	1800
IW-23	200555	5/11/11	6.75	24.5	3290	1800
		5/22/12	6.72	26.6	2870	1600
		4/15/13	7.19	22.5	2990	1810
		11/21/06	NM	NM	NM	1540
		1/23/07	6.6	22.8	1249	1640
		4/11/07	6.88	26.7	1528	1670
		7/25/07	6.49	24.7	1541	1670
		1/16/08	7.17	24.3	1303	1680
		4/21/08	6.71	28.6	1314	1710
		7/23/08	6.84	27.5	1420	1730
		10/24/08	6.81	27.9	1966	1780
		1/27/09	6.52	19.9	1963	1650
		4/20/09	6.82	25.4	1607	1700
		4/12/10	6.81	26.6	1491	1700
IW-24	200556	5/11/11	6.83	24.6	3280	1800
		5/22/12	6.72	28.9	2700	1600
		4/15/13	6.79	24.0	2930	1800
		7/18/07	6.78	29.0	1739	1790
		1/16/08	7.06	24.2	1387	1700
		4/22/08	6.68	28.7	1141	1650
		4/22/08 DUP	6.68	28.7	1141	1750
		7/23/08	6.68	30.7	1420	1730
		10/24/08	6.71	28.1	1058	1640
		1/27/09	6.43	21.3	1510	1560
		4/20/09	6.79	25.6	1604	1600
		4/20/09 DUP	6.79	25.6	1604	1500
		4/12/10	6.70	27.1	1450	1600
		5/11/11	6.76	24.6	3260	1700
		5/22/12	6.47	27.3	2800	1700
		4/15/13	6.83	24.4	2800	1900

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-25	219596	4/15/13	7.01	27.6	932	390
IW-26	219143	4/15/13	7.00	25.6	2620	1700
IW-28	219137	4/15/13	7.03	24.2	2930	1720
M-8	087390	12/6/06	7.50	25.5	380	NA
		12/6/06	7.60	NM	380	NA
		4/16/07	7.87	23.1	424	<0.5
		7/11/07	7.67	28.2	415	16.5
		1/9/08	7.68	23.7	458	50
		4/15/08	6.85	28	362	28.7
		7/25/08	7.62	27	398	24.5
		10/28/08	7.67	27.8	406	26.3
		10/28/08 DUP	7.67	27.8	406	26.2
		1/20/09	7.49	25.2	397	36.8
		5/12/09	7.62	26.8	387	29.6
		11/5/09	7.61	26.6	382	31.4
		5/28/10	7.63	26.9	448	45.1
		10/21/10	7.64	25.5	435	46.9
		6/15/11	7.57	26.1	501	59.3
		11/17/11	7.88	23.6	522	84.577
		6/29/12	7.73	27.9	417	24
		10/29/12	7.62	25.7	419	16.45
		4/17/13	7.74	27.1	567	140.61
		5/21/13	7.78	27.0	374	28.85
M-9	501652	1/17/07	7.50 ²	26.0	460	NA
		7/11/07	7.72	27.0	334	NA
		1/8/08	6.51	25.7	533	80
		1/8/08	7.67	26.7	480.7	65
		4/14/08	7.74	27.8	422	67.2
		7/21/08	7.52	29.5	485	68.7
		10/28/08	7.66	30.3	503	74.8
		1/20/09	7.64	24.1	470	81.6
		5/13/09	7.54	27.3	487	80.2
		7/14/09	7.60	27.0	420	81.7
		6/16/10	7.63	26.6	511	77
		6/2/11	7.59	27.1	525	75
		6/27/12	7.26	27.4	581	81
		5/1/13	7.81	26.5	461	66.05
		7/19/06	NM	NM	NM	66
		1/16/07	7.90	29.0	440	NA
		4/16/07	7.97	28.2	475	72.6
M-10	501653	7/12/07	8.05	27.0	322	NA
		1/8/08	7.91	24.8	537	73
		4/15/08	7.99	27.6	428	81
		7/21/08	7.69	31	489	89.8
		10/28/08	8.08	28.1	521	97.1
		1/20/09	7.91	29	467	95
		5/12/09	7.77	26.9	487	97
		7/14/09	7.20	25.0	420	96
		11/5/09	7.13	30.5	479	110
		11/5/09 DUP	7.13	30.5	479	107
		5/28/10	7.83	30.1	497	121
		10/21/10	7.76	27.1	585	139
		5/10/11	7.86	28.9	641	149
		11/16/11	8.04	27.6	612	162
		6/25/12	7.61	29.8	162	162
		10/29/12	7.88	27.0	645	158
		4/17/13	7.90	28.9	618	170.32
M-20	906595	3/22/07	7.10	27.0	3500	NA
		7/12/07	7.44	27.0	1970	NA
		1/9/08	7.15	25.6	1853	1750
		1/9/08	7.29	26.3	2878	1500
		4/14/08	7.18	27	1277	1550
		7/25/08	6.99	27.6	1857	1550
		10/28/08	7.03	28.2	1688	1660
		1/20/09	6.95	27.1	1506	1760
		5/12/09	6.88	28.0	1501	1580
		5/28/10	7.22	28.2	3050	1620
		5/9/11	7.29	27.8	2790	1710
		6/26/12	7.15	28.3	3050	1722.9
		4/23/13	7.50	26.6	2720	1801.6

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MH-10	803636	11/8/06	NM	NM	NM	1330
		1/9/07	6.70	28.5	1717	1310
		4/3/07	6.86	30.2	1267	1360
		7/16/07	6.87	31.4	1138	1410
		1/3/08	6.41	24.8	1626	1430
		4/28/08	6.60	31	973	1460
		7/31/08	7.07	32.5	1827	1550
		11/4/08	7.02	26.0	1856	1450
		1/2/09	6.54	26.1	1798	1400
		4/14/09	6.62	28.1	1260	1260
		4/26/10	7.05	29.9	1365	1500
		4/26/10 DUP	7.05	29.9	1365	1400
		5/18/11	7.03	27.4	2900	1600
		6/5/12	6.88	29.3	2910	1500
		6/10/13	7.17	30.2	1791	1720
MH-11	803637	1/11/07	7.33	25.0	1778	1590
		4/10/07	7.02	28.3	1327	1580
		7/17/07	6.87	28.8	1848	1650
		1/4/08	6.44	26.3	1690	1560
		4/29/08	6.48	30.2	959	1700
		7/29/08	6.97	32.2	1767	1550
		11/7/08	7.01	27.1	1350	1560
		1/16/09	7.04	27.5	1454	1400
		5/13/09	6.62	31.0	1569	1500
		4/27/10	6.61	29.3	1382	1400
		5/24/11	6.77	27.4	2650	1500
		5/30/12	6.83	30.3	2730	1440
		4/23/13	7.34	27.7	2410	1480
MH-13A	904071	11/10/06	NM	NM	NM	1680
		1/24/07	7.87	25.0	1458	1700
		4/18/07	7.1	27.4	1609	1720
		7/17/07	6.98	28.1	1553	1760
		1/4/08	6.97	26.1	1810	1710
		4/29/08	7.09	28.8	1174	1800
		7/16/08	7.03	27.4	1824	1720
		7/16/08 DUP	7.03	27.4	1824	1710
		10/20/08	7.07	27.7	1984	1800
		1/23/09	6.84	25.1	1510	1700
		4/15/09	7.12	25.6	1643	1650
		4/21/10	7.24	25.3	1384	1700
		5/23/11	7.12	26.9	3450	1840
		6/11/12	7.10	27.6	3340	1680
MH-13B	904072	4/3/13	7.20	25.9	2870	1760
		11/10/06	NM	NM	NM	1080
		1/24/07	8.07	25.9	1262	1100
		4/18/07	7.36	30	1396	1120
		7/17/07	7.28	28.5	1786	1150
		1/4/08	7.21	27.2	1576	1110
		4/29/08	7.26	29.6	985	1110
		7/16/08	7.42	31.5	1589	1110
		10/20/08	7.34	29.6	1627	1080
		1/23/09	7.13	26.6	1639	1130
		4/15/09	7.50	25.4	1370	1030
		4/15/09 DUP	7.50	25.4	1370	1100
		4/21/10	7.57	28.8	1100	1030
		5/23/11	7.28	28.3	2400	1090
MH-13C	904073	5/23/11 DUP	7.28	28.3	2400	1110
		6/11/12	7.24	29.1	2310	1020
		4/3/13	7.42	27.5	1818	1050
		11/10/06	NM	NM	NM	90
		1/24/07	9.12	22.9	450	100
		4/18/07	9.2	29.1	379	20
		7/17/07	8.78	33.8	380	20
		1/4/08	8.99	26.6	396	20
		5/7/08	8.71	30.4	363	40
		7/16/08	8.69	32.01	371	70
		10/20/08	8.90	32.8	380	60
		1/27/09	7.99	27.3	323	30
		4/15/09	8.79	25.9	421	42
		4/21/10	8.84	28.0	385	27
		5/23/11	8.65	30.4	364	43
		6/11/12	8.61	30.7	411	50
		4/3/13	8.77	28.3	340	45

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MH-25A	201528	11/13/06	NM	NM	NM	190
		1/10/07	8.09	26.0	344	10
		4/4/07	7.82	26.6	322	<10
		7/20/07	7.63	28.6	431	<10
		1/2/08	7.91	25.3	401	10
		4/25/08	7.54	27	311	30
		7/2/08	7.66	27.6	342	<10
		10/17/08	7.84	27.5	333	50
		1/5/09	7.75	24.5	336	12
		4/15/09	7.81	25.1	350	4
		4/13/10	7.76	25.3	334	9
		4/27/11	7.76	25.9	358	16
		5/1/12	7.83	27.8	376	13
MH-25B	208429	4/3/13	7.69	26.8	335	9
		11/13/06	NM	NM	NM	1660
		1/10/07	7.54	26.1	1440	1680
		4/4/07	7.32	28.7	1333	1550
		7/20/07	7.16	28.4	1649	1760
		1/2/08	7.10	26.5	1900	1730
		4/25/08	7.05	28.6	1138	1750
		7/2/08	7.04	28.6	1851	1650
		10/17/08	7.74	28.8	1768	1660
		1/5/09	7.22	24.9	1581	1590
		4/15/09	7.25	25.2	1483	1600
		4/13/10	7.59	28.1	1120	900
		4/27/11	7.35	27.0	3050	1810
MH-25C	208426	6/15/11	7.31	29.3	3690	1700
		5/1/12	7.31	29.3	1864	1690
		4/3/13	7.46	27.9	2620	1700
		11/13/06	NM	NM	NM	1290
		1/10/07	7.46	26.3	1361	1250
		4/13/07	7.24	26	1357	1260
		7/20/07	7.13	30.2	1599	1240
		1/2/08	7.25	28.2	1608	1250
		4/25/08	7.20	30	1031	1240
		7/2/08	7.13	28.4	1736	1330
		10/17/08	7.17	30.4	1624	1270
		1/5/09	7.15	27	1466	1250
		4/15/09	7.28	26.6	1368	1270
MH-26A	201527	4/13/10	7.24	27.6	1292	1600
		4/27/11	8.41	25.1	1874	1290
		5/1/12	7.39	29.5	1667	1290
		4/3/13	7.44	28.0	1838	1270
		4/3/13 DUP	7.44	28.0	1838	1290
		11/13/06	NM	NM	NM	10
		1/15/07	7.89	26.2	316	<10
		4/4/07	7.83	27	325	10
		7/19/07	7.80	26.9	428	20
		1/2/08	7.72	25.3	395	<10
		4/25/08	7.62	25.3	317	100
		7/2/08	7.57	27.8	337	20
		10/17/08	7.70	27.4	327	20
MH-26B	208427	1/5/09	7.65	26.4	343	13
		4/21/09	7.57	26.3	322	10
		4/13/10	7.60	26.7	332	8
		4/27/11	7.78	25.7	357	8
		4/27/11 DUP	7.78	25.7	357	9
		5/2/12	7.59	27.5	386	9
		4/4/13	7.72	27.0	350	8
		11/13/06	NM	NM	NM	1560
		1/15/07	7.53	26.4	1310	1590
		4/4/07	7.31	30.5	1448	1620
		7/19/07	7.10	29.0	1652	1590
		7/19/07	7.10	29.0	1652	1570
		1/2/08	7.09	26.5	1849	1670
		4/25/08	6.95	28.8	1095	1630
		7/2/08	6.98	29.1	1835	1660
		10/20/08	7.16	29.2	1760	1650
		1/5/09	7.07	26.4	1661	1540
		1/5/09 DUP	7.07	26.4	1661	1500
		4/21/09	6.85	28.8	1238	1520
		4/13/10	7.27	27.3	1290	1600
		5/5/11	7.17	27.2	2910	1710
		5/1/12	7.26	29.7	1912	1680
		5/1/12 DUP	7.26	29.7	1912	1750
		4/4/13	7.26	28.4	2550	1690

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MH-26C	208428	11/13/06	NM	NM	NM	730
		1/15/07	7.89	24.6	1059	740
		4/4/07	7.58	29.5	1128	720
		7/19/07	7.55	30.5	1267	730
		7/19/07	7.55	30.5	1267	740
		1/2/08	7.68	28.2	1411	740
		4/25/08	8.58	27.8	872	580
		7/2/08	7.90	30.8	1251	720
		7/2/08 DUP	7.90	30.8	1251	720
		1/5/09	7.36	25.7	1270	680
		4/21/09	7.49	29.6	1034	660
		4/13/10	7.57	28.4	1078	770
		4/13/10 DUP	7.57	28.4	1078	780
		4/27/11	7.59	29.1	1755	810
		5/1/12	7.56	30.6	1428	820
		4/4/13	7.58	29.3	1533	880
MH-28	903548	11/14/06	NM	NM	NM	1860
		1/9/07	7.22	25.8	2690	1920
		4/17/07	6.98	26.1	1359	1920
		7/16/07	6.89	27.1	1206	1880
		1/21/08	7.39	23.9	903	1940
		4/8/08	6.99	25.5	1852	1900
		7/1/08	6.95	26.62	3322	1680
		10/6/08	6.97	26.7	3500	1910
		1/8/09	7.05	25.7	3600	1910
		4/7/09	6.84	26.4	6300	1860
		10/13/09	6.88	25.7	1589	1800
		4/15/10	7.11	25.1	1399	1900
		10/12/10	6.99	25.3	3460	1820
		5/17/11	6.94	25.6	3380	2000
		10/4/11	7.12	25.8	1390	1800
		5/21/12	6.64	28.8	3360	1600
		10/9/12	6.97	26.8	2980	1900
		4/2/13	6.95	26.9	2930	1867.1
MH-29	903649	11/14/06	NM	NM	NM	1640
		1/9/07	7.47	25.8	2600	1660
		1/9/07	7.47	25.8	2600	1650
		4/17/07	7.01	25.1	1345	1690
		7/16/07	6.95	27.4	1177	1650
		1/18/08	7.17	23.5	1045	1710
		4/8/08	6.98	24.1	1580	1700
		7/1/08	6.99	25.95	3361	1730
		10/6/08	6.95	26.9	3300	1740
		1/9/09	7.03	25.7	9200	1730
		4/7/09	6.80	26.4	7700	1720
		4/7/09 DUP	6.80	26.4	7700	1700
		10/13/09	6.95	25.0	1421	1600
		10/13/09 DUP	6.95	25.0	1421	1700
		4/15/10	6.99	24.9	1358	1700
		10/12/10	7.04	23.9	3290	1520
		4/20/11	6.98	26.0	2950	1790
		4/20/11 DUP	6.98	26.0	2950	1770
		10/4/11	6.91	25.3	1765	1600
		5/21/12	6.62	26.6	3210	1600
		10/9/12	6.97	26.3	2710	1700
		4/2/13	7.06	24.9	2750	1707.1
MH-30	903884	11/10/06	NM	NM	NM	1690
		1/9/07	7.33	26.2	2780	1760
		4/9/07	7.3	27.3	1529	1810
		7/11/07	7.18	31.9	1694	1820
		1/18/08	7.13	28.5	1147	1830
		4/8/08	7.27	27.1	1505	1830
		7/1/08	7.02	30.73	3740	1660
		10/6/08	6.95	29.8	3900	1810
		1/7/09	7.12	28	3600	1840
		4/7/09	6.81	29.5	3400	1790
		4/7/09 DUP	6.81	29.5	3400	1800
		4/15/10	6.96	28.9	1697	1480
		5/17/11	6.95	27.5	3360	1760
		5/17/11 DUP	6.95	27.5	3360	1750
		4/26/12	7.05	28.1	1618	1738
		6/6/13	7.26	29.5	2630	1760
		6/6/13 DUP	7.26	29.5	2630	1800

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-1A	907342	8/8/07	7.17	29.0	370	19.2
		1/24/08	7.83	24.0	370	20
		4/9/08	7.42	24.1	383	21
		7/14/08	7.41	27.9	359	16.6
		10/17/08	7.46	27.7	357	17.9
		1/16/09	7.31	22.6	365	18.1
		4/1/09	7.55	26.5	387	18.2
		7/1/09	7.64	28.5	361	16.3
		10/22/09	7.53	26.4	360	16.6
		10/22/09 DUP	7.53	26.4	360	16.6
		4/16/10	7.52	26.7	357	18.5
		10/13/10	7.51	27.5	372	16
		5/5/11	7.51	27.4	401	17.9
		10/6/11	7.79	23.4	371	16.143
		6/12/12	7.40	27.9	371	16.98
		10/24/12	7.69	25.1	368	16.5
		4/8/13	7.55	25.6	363	17.92
MO-2007-1B	907210	8/2/07	7.41	30.7	321	18.9
		1/24/08	7.78	26.9	375	30
		4/9/08	7.70	23.1	400	35
		7/14/08	7.68	26.6	402	39.8
		10/17/08	7.56	28.1	423	54.3
		1/16/09	7.49	28.2	427	69.7
		4/1/09	7.78	26.4	511	84.1
		7/1/09	7.57	30.1	527	99
		10/22/09	7.63	28.5	600	143
		4/16/10	7.59	26.9	663	212
		10/13/10	7.46	28.7	1026	337
		10/13/10 DUP	7.46	28.7	1026	360
		5/5/11	7.42	28.6	1214	479
		10/6/11	7.84	24.8	1178	604.67
		10/6/11 DUP	7.84	24.8	1178	614.84
		6/12/12	6.99	29.0	1664	766.0
		10/24/12	7.56	26.2	1460	975.8
		4/8/13	7.57	26.5	1577	873.7
MO-2007-1C	907209	7/31/07	7.35	27.9	523	112
		1/24/08	7.84	26.9	520	140
		4/9/08	7.57	27.3	596	149
		4/9/08 DUP	7.57	27.3	596	153
		7/14/08	7.64	31.4	608	165
		10/21/08	7.80	29.8	573	146
		1/16/09	7.17	27.5	652	233
		1/16/09 DUP	7.17	27.5	652	218
		4/1/09	7.66	27.1	700	229
		7/1/09	7.33	30.8	367	236
		7/1/09 DUP	7.33	30.8	367	227
		10/22/09	7.66	28.1	356	301
		4/16/10	7.66	28.5	730	320
		10/13/10	7.72	29.1	1004	377
		4/20/11	7.28	29.2	1009	381
		10/6/11	8.10	25.9	942	393.94
		6/12/12	7.05	29.5	1085	406.4
		10/24/12	8.40	26.5	694	239.2
		10/24/12 DUP	8.40	26.5	694	235.26
		4/8/13	7.88	26.4	1017	416.3
MO-2007-2	906765	6/14/07	7.05	32.2	1372	591
		8/9/07	7.11	32.2	1271	520
		1/22/08	7.48	30.9	757	530
		4/17/08	7.32	29.8	818	473
		7/14/08	7.11	31.3	987	472
		7/14/08 DUP	7.11	31.3	987	446
		1/16/09	7.27	30.6	1200	456
		4/1/09	7.34	28.5	922	458
		4/13/10	7.17	30.3	855	439
		4/13/10 DUP	7.17	30.3	855	450
		4/27/11	7.27	28.7	1249	507
		4/27/11 DUP	7.27	28.7	1249	503
		5/2/12	7.30	31.8	1245	543.50
		4/8/13	7.34	30.1	1164	455.7

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-3B	906816	1/21/08	7.94	26.5	353	40
		4/16/08	7.77	28.2	322	37
		7/14/08	7.70	30.2	338	37.8
		10/22/08	7.69	28.1	379	42.4
		10/22/08 DUP	7.69	28.1	379	41.6
		1/19/09	7.82	28.1	342	36.9
		1/19/09 DUP	7.82	28.1	342	36.4
		4/1/09	7.89	25.7	376	38.2
		7/27/09	7.78	28.2	353	37.2
		10/22/09	7.76	28.0	354	39.1
		1/20/10	7.97	27.6	328	37.9
		4/14/10	7.83	28.6	336	40.4
		7/21/10	7.86	27.7	372	38.7
		10/26/10	7.78	26.6	361	39.1
		1/18/11	7.83	27.3	353	38.2
		5/4/11	7.81	29.3	359	38.1
		7/6/11	7.75	30.2	362	38.3
		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
		5/8/12	7.88	30.8	329	37.64
		8/7/12	7.88	29.1	419	36.26
		10/10/12	7.94	28.1	390	37.01
		1/8/13	8.10	27.0	374	33.77
		4/9/13	8.01	25.5	329	37.54
		5/21/13	8.17	26.9	284	26.96
		8/27/13	8.59	27.8	204	3.47
		8/27/13 DUP	8.59	27.8	204	4.13
MO-2007-3C	906817	6/28/07	7.93	32.2	570	136
		1/21/08	8.21	27.6	507	130
		4/15/08	7.87	30.1	477	127
		7/17/08	7.98	32.7	493	126
		10/21/08	8.07	32.9	519	103
		1/19/09	8.00	30.7	490	113
		4/1/09	8.09	28.3	541	115
		7/22/09	8.07	31.4	510	107
		10/22/09	8.01	29.8	488	108
		1/20/10	8.20	26.2	469	103
		4/14/10	8.07	30.9	465	110
		7/21/10	8.05	30.4	511	101
		10/26/10	7.92	29.5	471	104
		1/18/11	8.06	29.1	492	106
		5/4/11	8.11	30.4	504	107
		7/6/11	8.02	32.5	248	101
		10/5/11	8.28	29.3	524	96.818
		1/11/12	7.92	29.4	283	104.03
		5/7/12	8.10	30.3	440	95.99
		8/7/12	7.93	30.7	553	93.25
		10/10/12	8.04	29.4	487	99.13
		1/8/13	8.09	26.5	431	62.35
		1/8/13 DUP	8.09	26.5	431	62.62
		4/9/13	8.35	28.2	432	89.78
		8/27/13	8.81	29.6	324	47.0
MO-2007-4A	907213	1/22/08	7.82	25.0	405	40
		4/16/08	7.65	25.8	372	33.1
		7/18/08	7.44	27.4	416	35.3
		10/22/08	7.58	26.9	420	40.1
		1/19/09	7.52	28	392	35.9
		4/2/09	7.85	26.8	393	36.7
		4/2/09 DUP	7.85	26.8	393	36.5
		7/1/09	7.55	26.4	395	36.3
		10/26/09	7.64	27.2	378	35.7
		1/26/10	7.66	25.7	356	36.0
		4/14/10	7.63	25.2	379	37.0
		7/21/10	7.54	26.9	420	34.9
		10/13/10	7.55	26.1	414	35.2
		1/19/11	7.61	25.8	403	35.8
		5/4/11	7.57	26.5	411	35.9
		7/6/11	7.47	27.4	417	35.3
		10/5/11	7.82	24.1	435	34.47
		1/17/12	7.54	24.5	274	37.55
		5/7/12	7.49	24.7	381	35.62
		8/13/12	7.53	26.5	378	35.33
		10/23/12	7.48	27.2	380	94.87
		2/21/13	7.53	28.6	337	33.48
		4/10/13	7.82	26.0	319	34.69
		7/10/13	7.68	25.3	347	36.6

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-4B	907212	1/7/08	7.69	25.5	445	NA
		4/16/08	7.66	26.9	343	33.6
		7/18/08	7.57	29.2	391	34.8
		7/18/08 DUP	7.57	29.2	391	35.1
		10/22/08	7.73	30.8	407	34.7
		1/21/09	7.71	27.3	377	32.9
		4/2/09	7.93	28.3	363	34.6
		7/1/09	7.64	27.8	370	34.7
		10/26/09	7.68	28.7	348	34.5
		1/26/10	7.74	23.7	332	34.1
		4/14/10	7.76	25.1	342	35.1
		7/21/10	7.71	30.2	379	34
		7/21/10 DUP	7.71	30.2	379	34.9
		10/13/10	7.69	28.1	378	34.2
		1/19/11	7.73	26.9	367	34.6
		1/19/11 DUP	7.73	26.9	367	34.4
		5/4/11	7.72	28.1	379	34.5
		7/6/11	7.73	28.0	381	34.4
		10/5/11	8.01	27.6	401	34.194
		10/5/11 DUP	8.01	27.6	401	33.36
		1/17/12	7.81	26.7	259	33.14
		5/7/12	7.83	29.0	342	34.25
		8/13/12	7.75	28.2	353	34.02
		10/23/12	7.72	27.9	364	34.37
		2/21/13	7.75	25.7	299	32.01
		4/10/13	8.06	24.7	312	33.31
		7/10/13	8.48	25.9	200	4.51
MO-2007-4C	907211	8/16/07	7.62	35.2	472	78.7
		1/22/08	8.33	27.3	465	80
		4/16/08	8.19	29.9	420	80
		7/18/08	8.27	31.9	467	78.6
		10/22/08	8.45	31.8	467	85.9
		1/21/09	8.84	29.1	467	78.5
		4/2/09	8.48	30.3	444	81
		7/1/09	8.25	31.1	446	82.7
		10/26/09	8.22	30.5	427	83.9
		10/26/09 DUP	8.22	30.5	427	83.8
		1/26/10	8.40	30.0	409	83.2
		4/14/10	8.11	27.6	423	87.7
		7/21/10	8.23	32.4	467	85.6
		10/13/10	8.19	31.1	462	86.5
		1/19/11	8.21	28.9	447	87.6
		5/4/11	8.27	30.1	468	88.1
		7/6/11	8.17	30.8	468	85
		10/5/11	8.43	30.0	505	89.355
		1/12/12	8.52	29.5	329	92.92
		5/7/12	8.32	30.6	439	91.70
		8/13/12	8.31	28.8	451	91.22
		8/13/12 DUP	8.31	28.8	451	91.48
		10/23/12	8.86	28.5	436	94.65
		2/21/13	7.97	28.4	384	90.93
		4/10/13	8.46	29.3	362	93.24
		7/10/13	8.59	26.6	344	66.7
MO-2007-5B	907456	1/7/08	7.96	26.7	1138	NA
		4/17/08	7.94	27.7	877	390
		7/24/08	7.86	31.1	1040	343
		10/23/08	7.87	26.8	1086	412
		1/21/09	7.92	29.4	1049	400
		4/2/09	8.15	30.6	958	366
		1/25/10	7.98	28.8	1010	462
		4/27/10	7.90	29.3	987	427
		12/10/10	7.92	27.1	1215	454
		6/24/11	7.98	31.0	1199	513
		11/21/11	7.98	27.2	1249	494.3
		6/20/12	7.62	30.0	1465	519.3
		11/6/12	7.53	26.6	1420	453.9
		6/12/13	8.07	27.8	1036	430

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-5C	907457	8/23/07	7.46	31.4	780	248
		1/7/08	8.26	27.0	851	NA
		4/17/08	8.34	29.7	680	259
		7/24/08	8.30	31.3	746	233
		10/23/08	9.11	30.2	728	257
		1/23/09	9.30	21.1	710	222
		5/13/09	7.64	31.4	715	235
		10/27/09	7.55	30.1	651	238
		4/27/10	7.17	32.3	663	245
		4/27/10 DUP	7.17	32.3	663	248
		12/10/10	7.95	30.5	709	251
		5/24/11	7.76	29.7	682	238
		11/21/11	8.58	26.4	780	235.98
		6/18/12	8.35	30.0	816	238.89
		11/6/12	8.43	26.3	763	262.57
		6/13/13	8.88	25.8	704	251
MO-2007-6A	907607	1/22/08	7.84	26.5	380	30
		1/22/08 DUP	7.84	26.5	380	30
		4/18/08	7.61	27.2	346	20.5
		7/24/08	7.47	28.3	390	16.9
		10/23/08	7.49	25.8	388	18.6
		1/22/09	7.48	26.2	364	26.9
		4/2/09	7.88	25.5	378	23.7
		7/22/09	7.47	29.5	373	19.8
		10/26/09	7.52	27.9	349	23.5
		1/20/10	7.66	26.2	343	24.6
		4/21/10	7.59	27.3	375	34.7
		8/10/10	7.86	31.2	386	26.8
		10/26/10	7.74	28.3	381	33.9
		1/18/11	7.71	26.7	376	30.2
		5/5/11	7.59	29.0	384	29.2
		7/7/11	7.72	29.1	397	36.6
		7/7/11 DUP	7.72	29.1	397	37.1
		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
		6/12/12	7.65	28.2	389	34.98
		8/13/12	7.84	29.2	362	36.91
		10/18/12	7.77	28.8	368	30.42
		1/8/13	7.70	27.6	354	25.17
		4/9/13	8.04	28.5	329	32.44
		4/9/13 DUP	8.04	28.5	329	32.94
		7/10/13	8.20	27.9	270	18.30
MO-2007-6B	907606	1/21/08	8.13	29.8	467	80
		4/17/08	8.09	29.9	453	90.4
		7/24/08	8.00	33.8	473	81.5
		10/23/08	8.01	28.9	446	63.2
		1/22/09	7.45	29.9	443	84.5
		4/2/09	8.08	27.7	444	75.7
		7/22/09	7.86	32.7	427	63.5
		10/26/09	7.90	30.5	398	62.1
		1/20/10	8.05	27.4	406	69.7
		4/21/10	7.95	29.5	380	57.9
		4/21/10 DUP	7.95	29.5	380	57.9
		8/10/10	7.86	31.2	438	68.8
		8/10/10 DUP	7.86	31.2	438	68.6
		10/26/10	7.89	30.8	399	57.7
		1/18/11	7.85	30.4	396	58.5
		5/5/11	7.84	32.8	404	57.2
		7/7/11	7.88	32.8	405	57.5
		10/6/11	8.08	27.0	405	55.342
		1/11/12	7.57	29.9	235	57.78
		6/12/12	7.62	31.5	399	55.99
		8/13/12	7.61	32.2	374	56.54
		10/18/12	7.82	29.8	383	50.70
		1/8/13	7.68	27.2	380	37.31
		4/9/13	8.03	29.8	361	54.72
		7/10/13	8.80	28.1	306	42

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2009-1	910458	4/24/09	7.23	31.3	397	62.1
		7/29/09	8.18	32.9	495	97.7
		7/29/09 DUP	8.18	32.9	495	96.4
		11/3/09	8.17	29.5	513	109
		1/25/10	8.23	29.2	481	82.1
		4/20/10	8.21	30.4	467	99
		8/10/10	8.23	31.4	528	109
		12/15/10	8.29	29.0	504	95
		12/15/10 DUP	8.29	29.0	504	94
		2/2/11	8.69	26.9	432	92
		6/16/11	8.30	32.7	468	102
		8/31/11	8.33	31.1	560	108
		12/1/11	8.57	28.9	479	91.82
		1/11/12	8.18	29.9	292	93.84
		5/9/12	8.47	25.8	479	97.69
		8/15/12	8.47	32.7	454	102.4
		11/29/12	8.64	26.5	480	94.26
		1/8/13	8.79	27.0	522	98.57
		4/10/13	8.67	29.8	403	105.80
		7/11/13	8.67	27.9	450	118
NP-2	624028	7/18/07	7.30	23.2	816	NA
		6/4/07	7.20	25.9	411	41.2
		8/13/07	7.16	26.0	441	41.7
		1/11/08	7.60	25.0	760	43.5
		1/11/08 DUP	7.60	25.0	760	43.8
		4/17/08	7.34	25.4	379	40
		4/17/08 DUP	7.34	25.4	379	33
		7/11/08	7.62	25.9	455	40.5
		10/6/08	7.57	25.1	405	39.7
		2/9/09	7.61	25.3	337	42.4
		4/24/09	6.89	24.6	510	32.1
		9/17/09	6.68	26.6	414	40
		12/31/09	7.60	23.6	387	40.7
		2/17/10	6.35	24.7	450	42.0
		2/17/10 DUP	6.35	24.7	450	42.0
		4/22/10	7.25	23.49	447	41.9
		8/5/10	7.67	26.0	429	41.2
		10/25/10	7.66	25.3	446	41.4
		1/19/11	7.69	25.5	402	41.9
		5/3/11	7.84	25.3	413	43.5
		7/18/11	7.72	25.8	431	44.8
		7/18/11 DUP	7.72	25.8	431	44.6
		12/5/11	8.11	23.1	396	58.63
		3/21/12	7.86	24.9	337	64.11
		6/18/12	7.83	26.9	463	64.90
		8/15/12	8.01	26.3	357	65.72
		11/29/12	8.02	24.1	396	70.13
		2/20/13	7.94	23.6	376	69.34
		6/17/13	7.96	25.6	379	71.6
		8/27/13	7.82	25.4	337	64.3
PZ-7	561870	11/16/06	NM	NM	NM	270
		1/12/07	7.30	21.6	920	340
		4/17/07	7.13	23.8	777	360
		7/24/07	7.31	28.2	979	360
		1/7/08	7.02	19.2	1106	400
		4/28/08	7.09	27.6	699	440
		7/11/08	7.29	24.5	1173	400
		7/11/08 DUP	7.29	24.5	1173	400
		10/14/08	8.31	25.0	1300	420
		1/13/09	7.46	21.6	5200	440
		4/6/09	6.90	24.2	1100	460
		4/23/10	6.12	20.51	1400	432
		5/18/11	7.04	24.2	1463	472
		5/18/11 DUP	7.04	24.2	1463	470
		6/6/12	6.93	25.9	1458	489.1
		6/10/13	7.20	29.2	1038	500

TABLE 2
Compilation of Analytical Results for Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
PZ-8	561866	11/14/06	NM	NM	NM	470
		1/10/07	6.6	21.0	985	460
		4/11/07	7.41	19.8	1074	540
		7/12/07	7.27	27.3	935	450
		1/3/08	7.52	23.1	1045	320
		4/8/08	7.16	25.4	962	500
		7/1/08	7.15	26.49	1203	400
		10/8/08	7.22	28.2	1400	460
		1/8/09	7.05	22.3	1000	330
		4/8/09	6.54	24.1	900	280
		4/22/10	6.88	16.3	1230	305
		4/21/11	7.05	21.5	1147	364
		4/25/12	6.41	24.1	935	344.9
TMM-1	616156	6/10/13	7.35	26.7	943	380
		6/19/07	7.73	29.7	351	14.1
		8/6/07	8.04	25.2	505	<10
		1/10/08	7.77	24.2	254	<0.5
		4/18/08	7.54	25.1	268	<1
		7/9/08	7.94	27.3	296	7.3
		10/9/08	8.14	29.7	281	<0.5
		2/4/09	7.80	24.4	236	5.7
		4/21/09	7.92	26.7	281	5.5
		10/14/09	8.12	31.1	256	0.6
		4/20/10	8.08	27.0	281	12
		10/6/10	8.56	27.4	269	<0.5
		4/21/11	7.96	26.8	303	11.6
		12/21/11	7.10	20.4	1580	<0.5
		5/15/12	8.28	28.8	32.8	7.93
		11/23/12	7.64	22.8	479	<0.5
		11/23/12 DUP	7.64	22.8	479	<0.5
		6/19/13	8.41	29.9	263	1.43

Notes:

ADWR = Arizona Department of Water Resources

SU = Standard Units

deg C = degrees Celsius

µS/cm = microsiemens per centimeter

mg/L = milligrams per Liter

NA = not analyzed

NM = not measured

DUP = Duplicate sample

TABLE 3
Compilation of Groundwater Elevation Data

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)
1350	NR	Sierrita	3528649.387	499296.387	3033.25	7/12/07	474.29	2558.96
						11/8/07	477.30	2555.95
						1/9/08	477.00	2556.25
						4/14/08	475.50	2557.75
						8/7/08	477.88	2555.37
						11/5/08	479.21	2554.04
						1/19/09	477.33	2555.92
						6/29/09	479.57	2553.68
						5/28/10	478.78	2554.47
						5/9/11	480.42	2552.83
CC OF GV	501760	HGC	3527876.220	501635.382	2823.45	6/29/12	479.57	2553.68
						5/23/13	481.16	2552.09
						1/15/07	253.15	2570.30
						4/16/07	254.20	2569.25
						7/9/07	259.79	2563.66
						1/10/08	257.26	2566.19
						7/7/08	261.09	2562.36
						11/14/08	263.13	2560.32
						2/4/09	258.48	2564.97
						4/21/09	258.79	2564.66
CW-3	627483	HGC	3523809.985	500047.663	2941.71	4/22/10	259.51	2563.94
						5/14/13	258.20	2565.25
						6/6/07	265.35	2558.10
						8/10/07	267.40	2556.05
						11/6/07	269.98	2553.47
						1/11/08	264.40	2559.05
						4/17/08	266.46	2556.99
						7/11/08	270.95	2552.50
						10/6/08	271.78	2551.67
						2/9/09	267.51	2555.94
CW-6	627485	CWC	3525794.239	500891.072	2867.00	4/24/09	269.06	2554.39
						12/31/09	272.10	2551.35
						4/22/10	271.91	2551.54
						10/25/10	273.54	2549.91
						5/2/11	272.50	2550.95
						12/5/11	274.20	2549.25
						6/26/12	259.51	2563.94
						12/13/12	278.81	2544.64
						6/13/13	283.48	2539.97
						12/4/06	247.50	2619.50
						1/3/07	245.00	2622.00
						5/24/07	252.25	2614.75
						7/10/07	252.15	2614.85
						10/2/07	253.05	2613.95
						1/8/08	245.81	2621.19
						4/17/08	254.20	2612.80
						7/8/08	253.80	2613.20
						10/7/08	256.30	2610.70
						2/6/09	249.27	2617.73
						4/22/09	253.15	2613.85
						9/22/09	256.80	2610.20
						11/5/09	258.10	2608.90
						2/10/10	250.76	2616.24
						5/14/10	252.78	2614.22
						7/27/10	257.35	2609.65
						10/14/10	257.22	2609.78
						2/24/11	250.38	2616.62
						4/28/11	254.32	2612.68
						7/20/11	257.20	2609.80
						12/14/11	253.57	2613.43
						1/24/12	252.33	2614.67
						5/9/12	255.74	2611.26
						8/29/12	258.30	2608.70
						12/12/12	256.33	2610.67
						2/6/13	254.67	2612.33
						5/15/13	259.27	2607.73
						7/17/13	263.01	2603.99

TABLE 3
Compilation of Groundwater Elevation Data

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-7	502546	CWC	3528094.155	499659.842	2987.50	2/2/07	425.00	2562.50
						5/14/07	424.15	2563.35
						7/10/07	426.50	2561.00
						10/2/07	427.60	2559.90
						1/8/08	427.50	2560.00
						4/17/08	426.40	2561.10
						7/8/08	428.40	2559.10
						10/7/08	429.80	2557.70
						2/6/09	426.62	2560.88
						4/22/09	424.30	2563.20
						5/14/10	438.35	2549.15
						4/28/11	429.50	2558.00
						5/9/12	425.90	2561.60
CW-8	543600	CWC	3525661.191	499798.520	2957.50	5/15/13	458.53	2528.97
						1/3/07	336.50	2621.00
						5/24/07	338.14	2619.36
						8/10/07	339.80	2617.70
						10/2/07	340.60	2616.90
						1/8/08	337.97	2619.53
						4/17/08	339.20	2618.30
						7/8/08	341.75	2615.75
						10/7/08	342.75	2614.75
						2/6/09	339.12	2618.38
						4/22/09	341.20	2616.30
						4/12/10	342.00	2615.50
						4/28/11	342.68	2614.82
CW-9	588121	CWC	3528740.784	501072.040	2834.30	5/9/12	340.12	2617.38
						5/15/13	347.39	2610.11
						12/4/06	306.00	2528.30
						1/3/07	304.20	2530.10
						5/24/07	309.40	2524.90
						7/10/07	310.20	2524.10
						10/2/07	310.70	2523.60
						1/8/08	308.82	2525.48
						4/17/08	308.00	2526.30
						7/8/08	315.60	2518.70
						10/7/08	316.05	2518.25
						2/6/09	309.80	2524.50
						4/22/09	311.10	2523.20
						7/30/09	316.5	2517.80
						11/5/09	321.60	2512.70
						2/10/10	316.69	2517.61
						5/14/10	316.20	2518.10
						7/27/10	313.63	2520.67
						10/14/10	318.65	2515.65
						2/24/11	309.94	2524.36
						4/28/11	313.41	2520.89
						7/20/11	315.45	2518.85
						12/14/11	314.17	2520.13
						1/24/12	312.56	2521.74
						5/9/12	314.39	2519.91
						8/29/12	318.12	2516.18
						12/12/12	317.48	2516.82
						2/6/13	313.90	2520.40
						5/15/13	313.79	2520.51
						7/17/13	316.52	2517.78

TABLE 3
Compilation of Groundwater Elevation Data

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-10	207982	CWC	3523455.502	500913.364	2868.50	12/4/06	178.25	2690.25
						1/3/07	177.20	2691.30
						5/24/07	196.30	2672.20
						7/10/07	198.79	2669.71
						10/2/07	190.85	2677.65
						1/8/08	180.95	2687.55
						4/17/08	187.95	2680.55
						7/8/08	203.25	2665.25
						10/7/08	190.65	2677.85
						2/6/09	184.40	2684.10
						4/22/09	191.12	2677.38
						7/30/09	197.3	2671.20
						11/5/09	199.10	2669.40
						2/10/10	186.00	2682.50
						5/14/10	190.10	2678.40
						7/27/10	198.52	2669.98
						10/14/10	195.31	2673.19
						2/24/11	191.62	2676.88
						4/28/11	196.15	2672.35
						7/20/11	199.75	2668.75
						12/14/11	191.70	2676.80
						1/24/12	189.73	2678.77
ESP-1	623102	Sierrita	3526448.677	499969.682	2953.43	5/9/12	197.20	2671.30
						8/29/12	201.50	2667.00
						12/12/12	199.93	2668.57
						2/6/13	197.87	2670.63
						5/15/13	209.50	2659.00
						7/17/13	212.61	2655.89
						11/28/06	352.20	2601.23
						1/3/07	350.10	2603.33
						5/24/07	349.55	2603.88
						7/10/07	351.11	2602.32
						10/12/07	343.00	2610.43
						10/30/08	355.47	2597.96
						1/29/09	354	2599.43
						4/16/09	350.50	2602.93
						11/10/09	355.67	2597.76
						4/28/10	354.10	2599.33
						10/15/10	357.40	2596.03
ESP-2	623103	Sierrita	3526924.656	500241.637	2934.60	5/3/11	355.79	2597.64
						11/22/11	357.82	2595.61
						12/13/11	355.60	2597.83
						6/19/12	357.76	2595.67
						11/21/12	358.70	2594.73
						5/20/13	357.15	2596.28
						11/28/06	342.55	2592.05
						1/3/07	343.10	2591.50
						5/14/07	339.90	2594.70
						7/10/07	341.25	2593.35
						10/12/07	342.26	2592.34
						1/23/08	340.40	2594.20
						4/18/08	340.93	2593.67
						7/25/08	342.30	2592.30
						10/30/08	344.82	2589.78
						1/29/09	395.16	2539.44
						4/16/09	341.45	2593.15
						11/10/09	346.50	2588.10
						4/28/10	343.99	2590.61
						10/15/10	347.33	2587.27
						5/3/11	345.44	2589.16
						11/22/11	347.26	2587.34
						6/19/12	346.84	2587.76
						11/21/12	348.11	2586.49
						5/20/13	348.45	2586.15

TABLE 3
Compilation of Groundwater Elevation Data

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)
ESP-3	623104	Sierrita	3527377.239	500234.067	2935.80	11/28/06	360.40	2575.40
						1/3/07	358.60	2577.20
						5/14/07	355.85	2579.95
						7/1/07	358.05	2577.75
						10/30/08	361.12	2574.68
						1/29/09	410.05	2525.75
						4/16/09	353.20	2582.60
						11/12/09	363.37	2572.43
						4/28/10	361.69	2574.11
						10/15/10	365.00	2570.80
						5/3/11	363.35	2572.45
						11/22/11	364.91	2570.89
						6/19/12	364.50	2571.30
ESP-4	623105	Sierrita	3526132.758	499916.830	2958.60	11/21/12	357.92	2577.88
						5/22/13	356.23	2579.57
						11/28/06	349.20	2609.40
						1/12/07	348.30	2610.30
						5/4/07	346.90	2611.70
						7/24/07	348.80	2609.80
						10/12/07	352.41	2606.19
						1/23/08	349.65	2608.95
						4/18/08	350.39	2608.21
						7/25/08	352.13	2606.47
						10/30/08	355.42	2603.18
						1/29/09	352.50	2606.10
						4/16/09	356.87	2601.73
ESP-5	623106	Sierrita	3527082.232	502007.895	2820.00	10/23/09	355.64	2602.96
						4/28/10	351.56	2607.04
						10/15/10	358.16	2600.44
						5/3/11	355.65	2602.95
						11/22/11	356.91	2601.69
						11/12/12	358.92	2599.68
						5/20/13	363.95	2594.65
						2/12/07	219.50	2600.50
						5/4/07	217.75	2602.25
						7/3/07	224.60	2595.40
						11/8/07	228.42	2591.58
						1/28/08	222.00	2598.00
						4/22/08	220.08	2599.92
						8/7/08	225.88	2594.12
						11/3/08	228.92	2591.08
						2/17/09	221.89	2598.11
						6/2/09	224.10	2595.90
						4/28/10	223.28	2596.72
						5/3/11	224.15	2595.85
						6/19/12	229.73	2590.27
						5/20/13	230.08	2589.92

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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)
GV-01-GVDWID	603428	GVDWID	3522254.157	499812.869	2942.35	1/9/07	221.00	2721.35
						4/10/07	218.11	2724.24
						8/6/07	231.00	2711.35
						1/7/08	221.50	2720.85
						4/16/08	225.50	2716.85
						7/7/08	231.00	2711.35
						11/25/08	228.00	2714.35
						3/3/09	220.50	2721.85
						7/29/09	201.9	2740.45
						11/4/09	232.80	2709.55
						1/27/10	224.80	2717.55
						4/1/10	227.12	2715.23
						10/14/10	233.00	2709.35
						3/18/11	224.00	2718.35
						4/28/11	231.00	2711.35
						12/7/11	233.20	2709.15
						3/14/12	234.25	2708.10
						6/7/12	242.28	2700.07
						8/29/12	231.00	2711.35
						11/15/12	239.00	2703.35
						1/29/13	238.61	2703.74
GV-02-GVDWID	603429	GVDWID	3521654.457	499786.207	2930.47	5/16/13	254.09	2688.26
						7/11/13	248.19	2694.16
						1/9/07	185.30	2745.17
						4/10/07	187.10	2743.37
						7/11/07	200.45	2730.02
						10/3/07	199.33	2731.14
						1/7/08	190.62	2739.85
						4/16/08	194.95	2735.52
						7/7/08	201.05	2729.42
						11/25/08	199.58	2730.89
						2/4/09	192.88	2737.59
						7/29/09	231.9	2698.57
						11/4/09	203.50	2726.97
						1/27/10	195.15	2735.32
						4/1/10	197.10	2733.37
						7/28/10	202.76	2727.71
						10/14/10	204.55	2725.92
						1/20/11	198.88	2731.59
						4/28/11	204.77	2725.70
						7/20/11	206.14	2724.33
GV-SI-GVDWID	208825	HGC	3519509.930	497227.175	3042.65	12/7/11	204.43	2726.04
						3/14/12	204.35	2726.12
						6/7/12	211.76	2718.71
						8/29/12	219.00	2711.47
						11/15/12	214.51	2715.96
						1/29/13	209.49	2720.98
						5/16/13	219.48	2710.99
						7/11/13	220.75	2709.72
						01/09/07	237.50	2805.15
						04/10/07	238.55	2804.10
						08/06/07	240.31	2802.34
						10/03/07	244.40	2798.25
						01/07/08	237.75	2804.90
HAVEN GOLF	515867	ADWR	3526386.000	501651.000	ND	04/16/08	247.55	2795.10
						8/14/08	245.50	2797.15
						11/6/08	246.00	2796.65
						2/4/09	247.46	2795.19
						4/1/10	247.60	2795.05
						4/28/11	257.00	2785.65
						6/20/12	257.92	2784.73
						5/16/13	267.53	2775.12
						5/29/12	220.00	--

TABLE 3
Compilation of Groundwater Elevation Data

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)
I-10	608525	Sierrita	325607.430	977264.441	3210.58	1/15/07	655.89	2554.69
						4/16/07	630.00	2580.58
						7/10/07	656.00	2554.58
						1/8/08	659.58	2551.00
						4/14/08	658.80	2551.78
						7/21/08	657.10	2553.48
						10/24/08	660.82	2549.76
						5/12/09	660.80	2549.78
IW-1	623129	Sierrita	3521277.779	496905.892	3144.69	6/15/12	662.39	2548.19
						6/11/13	661.26	2549.32
						12/16/06 ¹	360.95	2783.74
						2/24/07 ¹	386.70	2757.99
						10/19/07 ¹	399.90	2744.79
						1/29/08	400.45	2744.24
						5/07/08 ¹	398.90	2745.79
						7/29/08 ¹	405.85	2738.84
IW-2	623130	Sierrita	497546.637	497546.637	3098.29	10/24/08 ¹	404.80	2739.89
						1/21/09	400	2744.69
						5/13/09	370.50	2774.19
						4/12/10	394.45	2750.24
						5/11/11	392.80	2751.89
						5/21/12	438.48	2706.21
						4/15/13	439.81	2704.88
						IW-2A	216464	Sierrita
2/24/07 ¹	406.80	2691.49						
5/4/2007 ¹	344.00	2754.29						
7/31/07 ¹	381.00	2717.29						
IW-3A	201732	Sierrita	3521722.640	497366.220	3121.45	4/25/08 ¹	412.90	2699.38
						5/13/09	358.80	2753.48
						4/12/10	410.18	2702.10
						5/11/11	394.91	2717.37
						5/21/12	404.32	2707.96
						4/15/13	370.91	2741.37
IW-4	623132	Sierrita	3522465.879	497371.700	3137.06	12/05/06 ¹	431.80	2689.65
						7/31/07 ¹	381.50	2739.95
						10/19/07 ¹	427.80	2693.65
						1/29/08	425.60	2695.85
						4/25/08 ¹	421.30	2700.15
						7/29/08 ¹	420.90	2700.55
						10/24/08 ¹	141.50	2979.95
						4/12/10	420.23	2701.22
						5/11/11	413.40	2708.05
						6/20/12	401.37	2720.08
IW-5	623133	Sierrita	3522814.850	497369.528	3137.65	5/14/13	449.56	2671.89
						2/24/07 ¹	417.70	2719.36
IW-5A	219131	NO SURVEY DATA				7/21/07 ¹	425.30	2711.76
						10/19/07 ¹	428.90	2708.16
						1/19/08	433.70	2703.36
						4/21/08 ¹	441.90	2695.16
						7/29/08 ¹	409.22	2727.84
						10/24/08 ¹	452.10	2684.96
						1/21/09	453	2684.06
						5/13/09	383.20	2753.86
						4/12/10	420.70	2716.36
						5/11/11	414.25	2722.81
						5/21/12	402.19	2734.87
						4/15/13	402.34	2734.72

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
IW-6A	545565	Sierrita	3523708.756	497381.226	3132.26	11/15/06 ¹	425.00	2707.26
						2/24/07 ¹	433.60	2698.66
						7/31/07 ¹	432.28	2699.98
						10/17/07 ¹	433.35	2698.91
						1/29/08	416.90	2715.36
						4/22/08 ¹	415.45	2716.81
						7/29/08 ¹	416.82	2715.44
						10/24/08 ¹	419.33	2712.93
						1/29/09	418	2714.26
						5/13/09	387.30	2744.96
						4/12/10	384.70	2747.56
						5/11/11	410.61	2721.65
						5/22/12	419.75	2712.51
						4/15/13	433.21	2699.05
IW-8	508236	Sierrita	3522020.520	497368.253	3122.19	2/24/07 ¹	434.05	2688.14
						7/31/07 ¹	438.75	2683.44
						10/19/07 ¹	436.80	2685.39
						1/29/08	437.25	2684.94
						4/25/08 ¹	436.70	2685.49
						7/29/08 ¹	437.00	2685.19
						10/24/08 ¹	436.92	2685.27
						1/21/09	439	2683.19
						5/13/09	377.80	2744.39
						4/12/10	438.36	2683.83
						5/11/11	430.52	2691.67
						5/21/12	438.67	2683.52
						5/14/13	379.15	2743.04
						11/15/06 ¹	402.72	2700.22
IW-9	508238	Sierrita	3522207.639	497369.791	3102.94	2/24/07 ¹	405.95	2696.99
						7/21/07 ¹	405.68	2697.26
						10/19/07 ¹	379.00	2723.94
						1/19/08	491.10	2611.84
						4/21/08 ¹	480.80	2622.14
						7/29/08 ¹	473.00	2629.94
						10/24/08 ¹	475.03	2627.91
						1/21/09	469	2633.94
						5/13/09	357.20	2745.74
						4/12/10	426.67	2676.27
						5/26/11	503.43	2599.51
						5/21/12	518.95	2583.99
						4/15/13	502.13	2600.81
						11/15/06 ¹	464.05	2665.59
IW-10	508237	Sierrita	3523122.199	497370.367	3129.64	2/24/07 ¹	463.40	2666.24
						7/21/07 ¹	464.22	2665.42
						10/18/07 ¹	465.25	2664.39
						1/19/08	465.75	2663.89
						4/21/08 ¹	463.29	2666.35
						7/29/08 ¹	466.11	2663.53
						10/24/08 ¹	468.33	2661.31
						1/21/09	465	2664.64
						5/13/09	391.20	2738.44
						4/12/10	463.16	2666.48
						5/11/11	456.68	2672.96
						5/22/12	466.57	2663.07
						4/15/13	405.06	2724.58

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
IW-11	508235	Sierrita	3523428.954	497371.414	3127.20	11/21/06 ¹	429.25	2697.95
						2/24/07 ¹	428.05	2699.15
						7/31/07 ¹	428.50	2698.70
						10/17/07 ¹	430.00	2697.20
						1/29/08	430.00	2697.20
						4/22/08 ¹	428.00	2699.20
						7/29/08 ¹	430.90	2696.30
						10/24/08 ¹	433.01	2694.19
						1/21/09	429	2698.20
						5/13/09	379.70	2747.50
						4/12/10	421.14	2706.06
						5/11/11	414.21	2712.99
						5/22/12	439.67	2687.53
IW-12	803638	Sierrita	3523969.869	497364.911	3138.18	4/15/13	463.19	2664.01
						2/24/07 ¹	456.20	2681.98
						7/21/07 ¹	428.78	2709.40
						10/17/07 ¹	433.00	2705.18
						7/29/08 ¹	425.90	2712.28
						10/24/08 ¹	425.90	2712.28
						1/29/09	427	2711.18
						5/13/09	375.80	2762.38
						4/12/10	425.40	2712.78
						5/11/11	415.81	2722.37
						5/22/12	411.45	2726.73
						5/14/13	420.22	2717.96
IW-13	545556	Sierrita	3524166.673	497363.820	3143.35	7/31/07	412.13	2731.22
						10/17/07 ¹	413.30	2730.05
						1/29/08	412.21	2731.14
						4/22/08 ¹	410.42	2732.93
						7/29/08 ¹	410.00	2733.35
						10/24/08 ¹	410.95	2732.40
						1/29/09	411	2732.35
						5/13/09	388.90	2754.45
						4/12/10	404.66	2738.69
						5/11/11	401.85	2741.50
						6/20/12	405.53	2737.82
						4/15/13	410.89	2732.46
IW-14	545557	Sierrita	3526924.656	497367.126	3146.42	11/15/06 ¹	471.68	2674.74
						2/24/07 ¹	463.35	2683.07
						7/31/07 ¹	474.00	2672.42
						10/16/07 ¹	480.00	2666.42
						1/29/08	478.50	2667.92
						4/21/08 ¹	457.75	2688.67
						7/29/08 ¹	478.06	2668.36
						10/24/08 ¹	467.07	2679.35
						1/29/09	466	2680.42
						5/13/09	383.30	2763.12
						4/21/10	422.20	2724.22
						5/11/11	404.48	2741.94
						5/22/12	458.57	2687.85
IW-15	545558	Sierrita	3526924.656	497372.873	3152.02	4/15/13	460.72	2685.70
						11/15/06 ¹	427.27	2724.75
						2/24/07 ¹	429.89	2722.13
						7/31/07 ¹	430.55	2721.47
						10/16/07 ¹	390.30	2761.72
						1/29/08	430.45	2721.57
						4/22/08 ¹	429.70	2722.32
						7/29/08 ¹	429.50	2722.52
						10/24/08 ¹	430.49	2721.53
						1/29/09	430	2722.02
						5/13/09	388.00	2764.02
						4/12/10	419.39	2732.63
						5/11/11	414.82	2737.20
						5/22/12	410.54	2741.48
						5/14/13	439.64	2712.38

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
IW-16	545559	Sierrita	3526924.656	497370.651	3162.85	11/15/06 ¹	409.69	2753.16
						2/24/07 ¹	409.95	2752.90
						7/31/07 ¹	409.50	2753.35
						10/16/07 ¹	409.17	2753.68
						1/29/08	409.20	2753.65
						4/22/08 ¹	408.89	2753.96
						7/29/08 ¹	409.02	2753.83
						10/24/08 ¹	408.29	2754.56
						1/29/09	409	2753.85
						5/13/09	402.00	2760.85
						4/12/10	405.68	2757.17
						6/29/11	339.30	2823.55
						6/27/12	402.80	2760.05
IW-17	545560	Sierrita	3525002.869	497373.717	3160.76	5/14/13	407.10	2755.75
						11/15/06 ¹	429.15	2731.61
						2/24/07 ¹	429.70	2731.06
						7/26/07 ¹	427.97	2732.79
						10/16/07 ¹	427.70	2733.06
						1/29/08	428.12	2732.64
						4/22/08 ¹	428.23	2732.53
						7/29/08 ¹	428.40	2732.36
						10/24/08 ¹	428.45	2732.31
						1/29/09	428	2732.76
						5/13/09	425.00	2735.76
						4/12/10	425.12	2735.64
						6/29/11	422.10	2738.66
IW-18	545561	Sierrita	3525169.771	497374.056	3171.15	6/27/12	424.10	2736.66
						5/14/13	428.86	2731.90
						11/21/06 ¹	449.02	2722.13
						2/24/07 ¹	449.55	2721.60
						7/21/07 ¹	446.35	2724.80
						10/16/07 ¹	445.25	2725.90
						1/19/08	446.75	2724.40
						4/21/08 ¹	447.48	2723.67
						7/29/08 ¹	447.00	2724.15
						10/24/08 ¹	446.30	2724.85
						1/29/09	447	2724.15
						5/13/09	441.50	2729.65
						4/12/10	442.94	2728.21
IW-19	545562	Sierrita	3525343.392	497373.630	3155.39	6/29/11	435.35	2735.80
						6/27/12	436.97	2734.18
						5/14/13	443.11	2728.04
						11/21/06 ¹	418.60	2736.79
						2/23/07	444.65	2710.74
						7/26/07 ¹	435.85	2719.54
						1/29/08	451.28	2704.11
						4/21/08 ¹	452.00	2703.39
						7/29/08 ¹	451.88	2703.51
						10/24/08 ¹	451.08	2704.31
						1/29/09	451	2704.39
						5/13/09	413.90	2741.49
						4/12/10	445.24	2710.15
						5/11/11	436.15	2719.24
						5/22/12	432.62	2722.77
						5/14/13	439.33	2716.06

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
IW-20	545563	Sierrita	3525568.770	497364.739	3164.21	11/21/06 ¹	421.25	2742.96
						1/29/07	445.30	2718.91
						7/26/07 ¹	426.21	2738.00
						10/16/07 ¹	424.15	2740.06
						1/29/08	424.65	2739.56
						4/21/08 ¹	425.15	2739.06
						7/29/08 ¹	422.99	2741.22
						10/24/08 ¹	424.14	2740.07
						1/29/09	442	2722.21
						5/13/09	414.00	2750.21
						4/29/10	418.07	2746.14
						5/11/11	413.15	2751.06
						6/20/12	414.50	2749.71
IW-21	545664	Sierrita	3525773.266	497374.585	3171.37	6/17/13	417.26	2746.95
						11/21/06	424.80	2746.57
						2/23/07 ¹	449.65	2721.72
						7/26/07 ¹	454.04	2717.33
						10/16/07 ¹	442.10	2729.27
						1/29/08	441.68	2729.69
						4/21/08 ¹	441.50	2729.87
						7/29/08 ¹	454.00	2717.37
						10/24/08 ¹	443.08	2728.29
						1/29/09	484	2687.37
						5/13/09	415.60	2755.77
						5/11/11	736.00	2435.37
						4/15/13	612.58	2558.79
IW-22	200554	Sierrita	3523273.592	497369.590	3128.25	11/21/06 ¹	434.75	2693.50
						2/24/07 ¹	433.58	2694.67
						7/31/07 ¹	430.00	2698.25
						10/18/07 ¹	435.75	2692.50
						1/29/08	438.50	2689.75
						4/25/08 ¹	439.30	2688.95
						7/29/08 ¹	442.08	2686.17
						10/24/08 ¹	455.89	2672.36
						1/21/09	442	2686.25
						5/13/09	384.00	2744.25
						4/12/10	434.62	2693.63
						5/11/11	431.21	2697.04
						5/22/12	448.78	2679.47
IW-23	200555	Sierrita	3522970.788	497369.237	3128.53	4/15/13	459.72	2668.53
						12/16/06	544.50	2584.03
						2/24/07 ¹	499.20	2629.33
						7/31/07 ¹	500.00	2628.53
						10/18/07 ¹	518.95	2609.58
						5/13/09	375.00	2753.53
						4/12/10	538.78	2589.75
						5/11/11	516.15	2612.38
IW-24	200556	Sierrita	3522633.594	497371.670	3113.29	5/22/12	523.21	2605.32
						4/15/13	482.11	2646.42
						4/25/08 ¹	522.50	2590.79
						7/29/08 ¹	452.50	2660.79
						10/24/08 ¹	466.99	2646.30
						5/13/09	348.00	2765.29
						4/12/10	522.90	2590.39
IW-25	219596	Sierrita	3521725.393	497631.672	3091.66	5/11/11	456.05	2657.24
IW-26	219143	Sierrita	3522307.296	497652.833	3100.03	5/22/12	512.88	2600.41
IW-28	219137	Sierrita	3523178.619	497650.404	3110.71	4/15/13	533.21	2580.08
						4/15/13	422.52	2669.14
						4/15/13	492.21	2607.82
						4/15/13	447.89	2662.82

TABLE 3
Compilation of Groundwater Elevation Data

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)
M-8	87390	Sierrita	3529692.237	499658.916	2999.53	1/15/07	460.92	2538.61
						4/16/07	458.83	2540.70
						7/10/07	462.57	2536.96
						10/8/07	465.65	2533.88
						1/9/08	464.68	2534.85
						4/14/08	462.50	2537.03
						7/25/08	466.18	2533.35
						10/28/08	468.82	2530.71
						1/20/09	466.25	2533.28
						5/12/09	465.10	2534.43
						11/5/09	465.60	2533.93
						5/28/10	466.61	2532.92
						10/21/10	471.61	2527.92
						6/15/11	467.35	2532.18
						11/17/11	471.23	2528.30
M-9	501652	Sierrita	3530303.954	499984.173	2973.81	6/29/12	464.98	2534.55
						10/29/12	472.66	2526.87
						4/17/13	466.32	2533.21
						5/21/13	464.70	2534.83
						7/18/06	442.70	2531.11
						1/15/07	445.76	2528.05
						7/10/07	450.75	2523.06
						10/8/07	453.15	2520.66
						1/8/08	447.50	2526.31
						4/14/08	448.50	2525.31
						7/21/08	454.27	2519.54
						10/28/08	457.72	2516.09
						1/20/09	450.78	2523.03
						5/13/09	452.00	2521.81
						6/16/10	453.85	2519.96
M-10	501653	Sierrita	3530143.114	499659.027	3005.68	6/2/11	452.35	2521.46
						6/27/12	455.78	2518.03
						5/1/13	473.80	2500.01
						7/18/06	472.72	2532.96
						1/15/07	473.65	2532.03
						4/16/07	471.47	2534.21
						7/10/07	477.16	2528.52
						10/8/07	478.45	2527.23
						1/8/08	477.60	2528.08
						4/14/08	475.48	2530.20
						7/21/08	480.15	2525.53
						10/28/08	483.70	2521.98
						1/20/09	475.85	2529.83
						5/12/09	478.80	2526.88
						11/5/09	481.20	2524.48
M-20	906595	TBPI	3528491.771	499082.070	3054.00	6/4/10	480.29	2525.39
						10/21/10	486.40	2519.28
						5/10/11	478.33	2527.35
						11/16/11	484.66	2521.02
						6/25/12	482.73	2522.95
						10/29/12	486.64	2519.04
						4/17/13	478.63	2527.05
						7/18/06	484.18	3538.18
						1/15/07	489.14	3543.14
						7/10/07	486.70	3540.70
						7/12/07	493.26	3547.26
						1/9/08	495.80	3549.80
						4/14/08	494.22	3548.22
						7/25/08	493.70	3547.70
						10/28/08	498.00	3552.00
						1/20/09	497.75	3551.75
						5/12/09	496.80	3550.80
						5/28/10	498.51	3552.51
						5/9/11	499.14	3553.14
						6/26/12	500.50	3554.50
						4/23/13	499.65	3553.65

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-1	803629	Sierrita	3525872.911	497372.392	3179.27	11/21/06	443.90	2735.37
						1/10/07	444.15	2735.12
						4/20/07	442.70	2736.57
						7/3/07	441.33	2737.94
						11/8/07	440.10	2739.17
						1/28/08	439.97	2739.30
						4/24/08	440.44	2738.83
						8/7/08	439.65	2739.62
						11/14/08	441.45	2737.82
						2/17/09	440.90	2738.37
						6/2/09	440.70	2738.57
						4/13/10	438.62	2740.65
MH-3	803630	Sierrita	3525270.181	497472.430	3155.87	4/19/11	436.65	2742.62
						4/25/12	436.95	2742.32
						12/18/06	427.70	2728.17
						2/23/07	427.31	2728.56
						4/23/07	425.51	2730.36
						7/21/07	424.22	2731.65
						10/20/07	422.15	2733.72
						1/19/08	424.80	2731.07
						4/21/08	425.44	2730.43
						7/29/08	424.15	2731.72
						10/24/08	426.10	2729.77
						2/17/09	425.46	2730.41
MH-5	803632	Sierrita	3523725.339	497477.352	3123.47	6/2/09	425.18	2730.69
						4/13/10	418.92	2736.95
						4/19/11	420.10	2735.77
						4/25/12	419.53	2736.34
						4/2/13	425.84	2730.03
						11/21/06	389.22	2734.25
						1/12/07	390.70	2732.77
						4/20/07	391.60	2731.87
						7/3/07	391.66	2731.81
						11/8/07	392.95	2730.52
						1/28/08	391.40	2732.07
						4/24/08	390.30	2733.17
MH-6	803633	Sierrita	3522770.451	497436.646	3133.97	8/7/08	391.55	2731.92
						11/14/08	391.98	2731.49
						2/17/09	391.33	2732.14
						6/2/09	391.30	2732.17
						4/13/10	381.47	2742.00
						4/18/11	387.96	2735.51
						6/14/12	398.80	2724.67
						5/23/13	403.59	2719.88
						11/14/06	381.65	2752.32
						1/9/07	378.32	2755.65
						4/20/07	374.80	2759.17
						7/3/07	379.00	2754.97
						11/8/07	380.30	2753.67
						1/28/08	379.15	2754.82
						4/24/08	379.20	2754.77
						8/7/08	379.50	2754.47
						11/14/08	379.50	2754.47
						2/17/09	378.52	2755.45
						6/2/09	379.45	2754.52
						4/13/10	389.35	2744.62
						5/17/11	387.85	2746.12
						6/7/12	382.63	2751.34
						4/2/13	402.02	2731.95

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Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-7	803634	Sierrita	3522016.471	497502.475	3111.23	11/21/06	357.85	2753.38
						1/12/07	360.20	2751.03
						4/20/07	368.20	2743.03
						7/3/07	370.20	2741.03
						11/8/07	370.60	2740.63
						1/28/08	371.00	2740.23
						4/24/08	370.92	2740.31
						8/8/08	372.22	2739.01
						11/14/08	373.20	2738.03
						2/17/09	372.48	2738.75
						6/2/09	371.53	2739.70
						4/13/10	372.63	2738.60
						4/18/11	368.76	2742.47
MH-9	803635	Sierrita	3521252.607	496438.181	3162.57	6/14/12	381.09	2730.14
						5/23/13	391.31	2719.92
						11/8/06	380.58	2781.99
						1/9/07	362.10	2800.47
						4/20/07	363.60	2798.97
						7/3/07	365.25	2797.32
						11/8/07	367.95	2794.62
						1/28/08	368.58	2793.99
						4/24/08	367.08	2795.49
						8/8/08	370.38	2792.19
						11/14/08	371.70	2790.87
						2/17/09	371.97	2790.60
						6/2/09	370.30	2792.27
MH-10	803636	Sierrita	3521236.861	495717.770	3187.84	4/15/10	373.30	2789.27
						4/19/11	375.11	2787.46
						4/26/12	380.49	2782.08
						5/23/13	386.04	2776.53
						11/8/06	346.70	2841.14
						1/9/07	364.80	2823.04
						4/3/07	355.65	2832.19
						7/16/07	356.75	2831.09
						10/16/07	357.60	2830.24
						1/3/08	358.32	2829.52
						4/28/08	358.83	2829.01
						7/31/08	358.50	2829.34
						11/4/08	360.00	2827.84
MH-11	803637	Sierrita	3524463.648	498749.381	3041.76	1/2/09	360.15	2827.69
						4/14/09	363.50	2824.34
						4/26/10	362.04	2825.80
						5/18/11	363.39	2824.45
						6/5/12	366.25	2821.59
						6/10/13	369.96	2817.88
						11/9/06	369.90	2671.86
						1/11/07	369.55	2672.21
						4/10/07	370.46	2671.30
						7/17/07	372.75	2669.01
						10/3/07	373.80	2667.96
						1/4/08	373.36	2668.40
						4/29/08	373.89	2667.87
						7/29/08	375.10	2666.66
						11/7/08	376.85	2664.91
						3/19/09	374.88	2666.88
						5/13/09	375.75	2666.01
						4/27/10	375.85	2665.91
						5/24/11	376.65	2665.11
						5/24/12	376.65	2665.11
						4/23/13	383.85	2657.91

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-13A	904071	Sierrita	3523793.443	498823.857	3026.23	11/10/06	327.84	2698.39
						1/24/07	326.35	2699.88
						4/18/07	328.14	2698.09
						7/17/07	330.98	2695.25
						10/4/07	331.70	2694.53
						1/4/08	330.85	2695.38
						4/29/08	331.80	2694.43
						7/16/08	333.78	2692.45
						10/20/08	334.64	2691.59
						1/23/09	332.98	2693.25
						4/15/09	332.19	2694.04
						4/21/10	333.27	2692.96
						5/23/11	334.40	2691.83
MH-13B	904072	Sierrita	3523787.358	498829.881	3025.63	6/11/12	337.90	2688.33
						4/3/13	344.58	2681.65
						11/10/06	330.70	2694.93
						1/24/07	330.58	2695.05
						4/18/07	332.21	2693.42
						7/17/07	335.47	2690.16
						10/3/07	335.90	2689.73
						1/4/08	334.85	2690.78
						4/29/08	336.35	2689.28
						7/16/08	337.92	2687.71
						10/20/08	339.14	2686.49
						1/23/09	337.20	2688.43
						4/15/09	336.50	2689.13
MH-13C	904073	Sierrita	3523793.032	498797.461	3028.46	4/21/10	337.47	2688.16
						5/23/11	338.75	2686.88
						6/11/12	342.50	2683.13
						4/3/13	348.98	2676.65
						11/10/06	335.38	2693.08
						1/24/07	335.45	2693.01
						4/18/07	337.80	2690.66
						7/17/07	339.82	2688.64
						10/4/07	340.75	2687.71
						1/4/08	340.42	2688.04
						4/29/08	341.55	2686.91
						7/16/08	343.35	2685.11
						10/20/08	344.57	2683.89
MH-14	528098	Sierrita	3525269.340	497517.626	3153.46	1/23/09	343.82	2684.64
						4/15/09	343.08	2685.38
						4/21/10	343.86	2684.60
						5/23/11	344.30	2684.16
						6/11/12	348.75	2679.71
						4/3/13	353.62	2674.84
						12/18/06	427.28	2726.18
						2/23/07	426.75	2726.71
						4/23/07	425.58	2727.88
						7/10/07	424.20	2729.26
						10/17/07	422.80	2730.66
						1/18/08	424.87	2728.59
						4/8/08	425.13	2728.33
						7/22/08	423.92	2729.54
						10/6/08	426.03	2727.43
						2/13/09	425.90	2727.56
						4/7/09	424.90	2728.56
						4/15/10	422.91	2730.55
						8/12/10	421.82	2731.64
						4/19/11	418.94	2734.52
						4/25/12	419.83	2733.63
						4/2/13	425.59	2727.87

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-15E	528094	Sierrita	3523274.327	497584.800	3111.37	11/10/06	385.25	2726.12
						2/23/07	384.07	2727.30
						4/23/07	385.11	2726.26
						7/21/07	385.80	2725.57
						10/20/07	387.08	2724.29
						1/18/08	386.60	2724.77
						4/21/08	386.18	2725.19
						7/29/08	387.39	2723.98
						10/24/08	388.51	2722.86
						2/17/09	387.46	2723.91
						6/2/09	386.98	2724.39
						4/13/10	386.17	2725.20
						4/18/11	382.69	2728.68
MH-15W	528093	Sierrita	3523275.003	497524.067	3117.07	6/14/12	391.96	2719.41
						4/2/13	407.42	2703.95
						12/18/06	391.30	2725.77
						2/23/07	390.00	2727.07
						4/23/07	391.18	2725.89
						7/11/07	390.85	2726.22
						10/17/07	393.10	2723.97
						1/18/08	392.90	2724.17
						4/8/08	391.00	2726.07
						7/1/08	392.70	2724.37
						10/6/08	394.00	2723.07
						1/7/09	392.55	2724.52
						5/6/09	390.25	2726.82
MH-16E	528100	Sierrita	3521870.233	497576.673	3097.72	4/15/10	390.58	2726.49
						8/12/10	389.20	2727.87
						5/17/11	388.95	2728.12
						4/25/12	397.62	2719.45
						5/28/13	409.15	2707.92
						12/18/06	344.70	2753.02
						2/23/07	349.39	2748.33
						4/23/07	352.85	2744.87
						7/21/07	355.00	2742.72
						10/20/07	355.55	2742.17
						1/19/08	355.30	2742.42
						4/21/08	355.15	2742.57
						7/29/08	356.78	2740.94
MH-16W	528099	Sierrita	3521870.818	497516.074	3100.24	10/24/08	357.62	2740.10
						2/17/09	357.02	2740.70
						6/2/09	354.15	2743.57
						4/13/10	357.71	2740.01
						4/18/11	354.93	2742.79
						4/26/12	362.82	2734.90
						5/23/13	364.82	2732.90
						12/18/06	346.62	2753.62
						2/23/07	352.18	2748.06
						4/23/07	355.75	2744.49
						7/11/07	357.47	2742.77
						10/17/07	357.75	2742.49
						1/3/08	357.80	2742.44
						4/24/08	357.87	2742.37
						7/22/08	359.24	2741.00
						10/8/08	360.03	2740.21
						3/19/09	358.73	2741.51
						4/7/09	358.60	2741.64
						4/15/10	360.31	2739.93
						8/12/10	360.42	2739.82
						5/17/11	357.55	2742.69
						4/25/12	364.24	2736.00
						4/2/13	377.99	2722.25

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Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-24	563799	Sierrita	3523709.046	497390.515	3131.16	11/21/06	397.50	2733.66
						4/20/07	399.35	2731.81
						8/3/07	399.33	2731.83
						11/8/07	400.50	2730.66
						1/30/08	396.90	2734.26
						4/24/08	395.89	2735.27
						8/7/08	396.78	2734.38
						11/14/08	396.88	2734.28
						2/17/09	396.31	2734.85
						6/2/09	396.50	2734.66
						4/13/10	386.43	2744.73
						4/18/11	392.84	2738.32
MH-25A	201528	Sierrita	3526510.175	498880.349	3056.57	4/25/12	396.58	2734.58
						4/2/13	408.56	2722.60
						11/13/06	454.11	2602.46
						1/10/07	453.10	2603.47
						4/4/07	452.20	2604.37
						7/20/07	454.02	2602.55
						10/3/07	454.69	2601.88
						1/2/08	454.82	2601.75
						4/25/08	454.47	2602.10
						7/2/08	455.68	2600.89
						10/17/08	457.49	2599.08
						1/5/09	457	2599.57
MH-25B	208429	Sierrita	3526515.244	498870.343	3058.22	4/15/09	455.90	2600.67
						4/13/10	458.10	2598.47
						4/27/11	459.25	2597.32
						5/1/12	459.69	2596.88
						4/3/13	461.70	2594.87
						11/13/06	455.36	2602.86
						1/10/07	454.28	2603.94
						4/4/07	453.20	2605.02
						7/20/07	455.32	2602.90
						10/3/07	456.01	2602.21
						1/2/08	456.05	2602.17
						4/25/08	456.02	2602.20
MH-25C	208426	Sierrita	3526491.132	498874.666	3057.24	7/2/08	457.10	2601.12
						10/17/08	458.39	2599.83
						1/5/09	458.38	2599.84
						4/15/09	457.28	2600.94
						4/13/10	458.27	2599.95
						4/27/11	460.35	2597.87
						6/15/11	460.85	2597.37
						5/1/12	460.90	2597.32
						4/3/13	463.02	2595.20
						11/13/06	454.65	2602.59
						1/10/07	453.57	2603.67
						4/13/07	452.30	2604.94
						7/20/07	454.42	2602.82
						10/3/07	455.19	2602.05
						1/2/08	455.06	2602.18
						4/25/08	454.84	2602.40
						7/2/08	456.23	2601.01
						10/17/08	457.49	2599.75
						1/5/09	457.30	2599.94
						4/15/09	456.41	2600.83
						4/13/10	459.28	2597.96
						4/27/11	459.16	2598.08
						6/15/11	459.52	2597.72
						5/1/12	459.76	2597.48
						4/3/13	461.80	2595.44

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-26A	201527	Sierrita	3527818.233	498852.692	3070.89	11/13/06	495.74	2575.15
						1/15/07	495.65	2575.24
						4/4/07	493.75	2577.14
						7/19/07	495.02	2575.87
						10/2/07	496.12	2574.77
						1/2/08	496.28	2574.61
						4/25/08	495.73	2575.16
						7/2/08	496.98	2573.91
						10/17/08	498.23	2572.66
						1/5/09	498.76	2572.13
						4/21/09	497.85	2573.04
						4/13/10	499.68	2571.21
						4/27/11	500.71	2570.18
MH-26B	208427	Sierrita	3527814.016	498839.900	3070.50	5/2/12	501.05	2569.84
						4/4/13	501.96	2568.93
						11/13/06	493.00	2577.50
						1/15/07	492.85	2577.65
						4/4/07	490.78	2579.72
						7/19/07	492.01	2578.49
						10/2/07	493.18	2577.32
						1/2/08	493.76	2576.74
						4/25/08	492.98	2577.52
						7/2/08	494.10	2576.40
						10/20/08	495.31	2575.19
						1/5/09	495.88	2574.62
						4/21/09	494.90	2575.60
MH-26C	208428	Sierrita	3527806.770	498865.240	3069.11	4/13/10	496.77	2573.73
						5/5/11	497.73	2572.77
						5/1/12	498.00	2572.50
						4/4/13	499.03	2571.47
						11/13/06	494.45	2574.66
						1/15/07	494.10	2575.01
						4/4/07	492.30	2576.81
						7/19/07	493.62	2575.49
						10/2/07	496.58	2572.53
						1/2/08	495.35	2573.76
						4/25/08	494.37	2574.74
						7/2/08	495.55	2573.56
						10/20/08	496.78	2572.33
MH-28	903548	Sierrita	3524609.980	497471.427	3142.18	1/5/09	497.21	2571.90
						4/21/09	493.95	2575.16
						4/13/10	498.14	2570.97
						4/27/11	499.14	2569.97
						5/1/12	499.44	2569.67
						4/4/13	500.61	2568.50
						11/14/06	401.10	2741.08
						2/19/07	401.10	2741.08
						4/17/07	402.32	2739.86
						7/16/07	403.18	2739.00
						10/11/07	403.00	2739.18
						1/21/08	402.72	2739.46
						4/8/08	401.90	2740.28
						7/1/08	401.48	2740.70
						10/6/08	402.17	2740.01
						1/7/09	402	2740.18
						4/7/09	401.06	2741.12
						10/13/09	401.10	2741.08
						4/15/10	395.65	2746.53
						8/12/10	398.60	2743.58
						10/12/10	399.00	2743.18
						5/17/11	396.89	2745.29
						10/4/11	397.90	2744.28
						5/21/12	398.64	2743.54
						10/9/12	403.77	2738.41
						4/2/13	405.08	2737.10

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-29	903649	Sierrita	3522805.518	497604.326	3123.15	11/14/06	378.05	2745.10
						2/19/07	376.58	2746.57
						4/17/07	376.75	2746.40
						7/16/07	379.07	2744.08
						10/11/07	381.92	2741.23
						1/18/08	380.41	2742.74
						4/8/08	380.16	2742.99
						7/1/08	380.50	2742.65
						10/7/08	381.52	2741.63
						1/9/09	380.25	2742.90
						4/7/09	379.90	2743.25
						10/13/09	380.52	2742.63
						4/15/10	379.59	2743.56
						8/12/10	378.65	2744.50
						10/12/10	379.31	2743.84
						4/20/11	377.75	2745.40
						5/23/11	377.80	2745.35
						10/4/11	380.25	2742.90
MH-30	903884	Sierrita	3525926.812	496682.307	3232.45	5/21/12	389.39	2733.76
						10/9/12	365.70	2757.45
						4/2/13	392.00	2731.15
						11/10/06	422.78	2809.67
						1/9/07	421.65	2810.80
						4/9/07	419.32	2813.13
						7/11/07	416.85	2815.60
						10/2/07	416.95	2815.50
						1/18/08	417.34	2815.11
						4/8/08	418.12	2814.33
						7/1/08	417.71	2814.74
						10/6/08	417.11	2815.34
						1/7/09	416.37	2816.08
						4/7/09	415.10	2817.35
MO-2007-1A	907342	Sierrita	3529331.380	500016.947	2967.65	4/15/10	412.03	2820.42
						5/17/11	412.18	2820.27
						4/26/12	420.61	2811.84
						6/6/13	427.36	2805.09
						7/30/07	425.87	2541.78
						10/9/07	428.32	2539.33
						1/24/08	426.32	2541.33
						4/9/08	424.72	2542.93
						7/14/08	428.42	2539.23
						10/17/08	431.02	2536.63
						1/16/09	428.90	2538.75
						4/1/09	426.86	2540.79
						7/1/09	426.90	2540.75
						10/22/09	434.05	2533.60
						4/16/10	428.89	2538.76
						10/13/10	434.09	2533.56
						5/5/11	429.31	2538.34
						10/6/11	433.60	2534.05
						6/12/12	431.38	2536.27
						10/24/12	435.12	2532.53
						4/8/13	429.69	2537.96

TABLE 3
Compilation of Groundwater Elevation Data

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-2007-1B	907210	Sierrita	3529325.119	500021.574	2966.82	7/30/07	425.67	2541.15
						10/9/07	429.20	2537.62
						1/24/08	426.41	2540.41
						4/9/08	425.05	2541.77
						7/14/08	428.98	2537.84
						10/17/08	431.64	2535.18
						1/16/09	429.05	2537.77
						4/1/09	427.23	2539.59
						7/1/09	427.70	2539.12
						10/22/09	434.90	2531.92
						4/16/10	429.13	2537.69
						10/13/10	434.47	2532.35
						5/5/11	429.65	2537.17
						10/6/11	434.10	2532.72
MO-2007-1C	907209	Sierrita	3529328.959	500013.405	2968.58	6/12/12	431.95	2534.87
						10/24/12	435.62	2531.20
						4/8/13	429.03	2537.79
						7/30/07	423.87	2544.71
						10/9/07	427.02	2541.56
						1/24/08	424.00	2544.58
						4/9/08	423.30	2545.28
						7/14/08	426.73	2541.85
						10/21/08	429.49	2539.09
						1/16/09	426.75	2541.83
						4/1/09	424.90	2543.68
						7/1/09	428.81	2539.77
						10/22/09	427.60	2540.98
						4/16/10	426.93	2541.65
MO-2007-2	906765	Sierrita	3527621.102	497912.410	3153.83	10/13/10	431.88	2536.70
						4/20/11	427.32	2541.26
						10/6/11	431.80	2536.78
						6/12/12	429.40	2539.18
						10/24/12	433.08	2535.50
						4/8/13	426.50	2542.08
						8/9/07	575.30	2578.53
						10/9/07	576.60	2577.23
						1/22/08	577.22	2576.61
						4/17/08	576.65	2577.18
						7/14/08	577.35	2576.48
						10/17/08	578.54	2575.29
						1/15/09	579.10	2574.73
						4/1/09	578.38	2575.45
						4/13/10	580.50	2573.33
						4/27/11	581.41	2572.42
						5/2/12	581.75	2572.08
						4/8/13	582.45	2571.38

TABLE 3
Compilation of Groundwater Elevation Data

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-2007-3B	906816	Sierrita	3528508.801	500522.491	2912.15	9/10/07	359.38	2552.77
						10/9/07	359.55	2552.60
						1/21/08	357.13	2555.02
						4/16/08	357.10	2555.05
						7/14/08	358.71	2553.44
						10/22/08	361.77	2550.38
						1/19/09	358.95	2553.20
						4/1/09	357.70	2554.45
						7/27/09	361.21	2550.94
						10/22/09	365.50	2546.65
						3/11/10	359.36	2552.79
						4/14/10	360.30	2551.85
						7/21/10	362.20	2549.95
						10/26/10	364.82	2547.33
						1/18/11	361.99	2550.16
						5/4/11	361.59	2550.56
						7/6/11	363.80	2548.35
						11/22/11	365.10	2547.05
						1/11/12	363.36	2548.79
						5/8/12	362.09	2550.06
						8/7/12	363.87	2548.28
MO-2007-3C	906817	Sierrita	3528508.743	500529.713	2911.90	10/10/12	420.52	2491.63
						1/8/13	362.33	2549.82
						4/9/13	360.13	2552.02
						5/21/13	359.84	2552.31
						8/27/13	365.16	2546.99
						7/5/07	356.30	2555.60
						10/10/07	359.85	2552.05
						1/21/08	356.74	2555.16
						4/15/08	357.18	2554.72
						7/14/08	359.84	2552.06
						10/21/08	361.99	2549.91
						1/19/09	359.61	2552.29
						4/1/09	358	2553.90
						7/22/09	362	2549.90
						10/22/09	362.80	2549.10
						3/11/10	359.62	2552.28
						4/14/10	360.45	2551.45
						7/21/10	367.50	2544.40
						10/26/10	365.13	2546.77
						1/18/11	361.62	2550.28
						5/4/11	361.61	2550.29
						7/6/11	363.75	2548.15
						10/5/11	365.50	2546.40
						1/11/12	363.36	2548.54
						5/7/12	362.35	2549.55
						8/7/12	364.49	2547.41
						10/10/12	366.50	2545.40
						1/8/13	362.59	2549.31
						4/9/13	360.45	2551.45
						8/27/13	365.47	2546.43

TABLE 3
Compilation of Groundwater Elevation Data

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-2007-4A	907213	Sierrita	3525634.956	500383.682	2923.63	10/9/07	307.67	2615.96
						1/22/08	303.85	2619.78
						4/16/08	305.46	2618.17
						7/17/08	308.05	2615.58
						10/22/08	309.65	2613.98
						1/19/09	306.28	2617.35
						4/2/09	306.69	2616.94
						7/1/09	307.92	2615.71
						10/26/09	309.10	2614.53
						1/26/10	308.52	2615.11
						4/14/10	308.53	2615.10
						7/21/10	311.05	2612.58
						10/13/10	312.00	2611.63
						1/19/11	308.82	2614.81
						5/4/11	309.68	2613.95
						7/6/11	311.75	2611.88
						10/5/11	312.50	2611.13
						1/17/12	310.05	2613.58
						5/7/12	310.42	2613.21
						8/13/12	313.30	2610.33
MO-2007-4B	907212	Sierrita	3525613.952	500380.947	2923.57	10/11/07	308.72	2614.85
						1/7/08	304.22	2619.35
						4/16/08	306.48	2617.09
						7/18/08	308.95	2614.62
						10/22/08	310.77	2612.80
						1/21/09	306	2617.57
						4/2/09	306.72	2616.85
						7/1/09	309.1	2614.47
						10/26/09	313.00	2610.57
						1/26/10	308.29	2615.28
						4/14/10	308.79	2614.78
						7/21/10	311.22	2612.35
						10/13/10	312.39	2611.18
						1/19/11	308.84	2614.73
						5/4/11	310.40	2613.17
						7/6/11	312.85	2610.72
						10/5/11	313.50	2610.07
						1/17/12	309.81	2613.76
						5/7/12	311.47	2612.10
						8/13/12	314.42	2609.15
						10/23/12	315.28	2608.29
						2/21/13	311.79	2611.78
						4/10/13	313.17	2610.40
						7/10/13	317.96	2605.61

TABLE 3
Compilation of Groundwater Elevation Data

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-2007-4C	907211	Sierrita	3525624.484	500382.217	2923.66	8/12/07	307.13	2616.53
						10/12/07	308.78	2614.88
						1/22/08	304.90	2618.76
						4/16/08	306.75	2616.91
						7/18/08	309.10	2614.56
						10/22/08	311.41	2612.25
						1/21/09	306.80	2616.86
						4/2/09	311.49	2612.17
						7/1/09	311.68	2611.98
						10/26/09	311.30	2612.36
						1/26/10	309.53	2614.13
						4/14/10	309.58	2614.08
						7/21/10	312.75	2610.91
						10/13/10	313.49	2610.17
						1/19/11	309.94	2613.72
						5/4/11	311.53	2612.13
						7/6/11	314.05	2609.61
						10/5/11	314.80	2608.86
						1/12/12	311.00	2612.66
						5/7/12	312.37	2611.29
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	8/13/12	315.55	2608.11
						10/23/12	316.47	2607.19
						2/21/13	312.89	2610.77
						4/10/13	314.14	2609.52
						7/10/13	318.94	2604.72
						10/12/07	268.27	2676.08
						1/7/08	262.09	2682.26
						4/17/08	266.22	2678.13
						7/24/08	268.61	2675.74
						10/23/08	272.16	2672.19
						1/21/09	265.83	2678.52
						4/2/09	269.20	2675.15
						1/25/10	268.30	2676.05
						4/27/10	268.02	2676.33
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	12/10/10	272.31	2672.04
						6/24/11	275.70	2668.65
						11/21/11	273.28	2671.07
						6/20/12	277.46	2666.89
						11/6/12	280.33	2664.02
						6/12/13	288.32	2656.03
						8/23/07	294.04	2650.87
						10/13/07	289.70	2655.21
						1/7/08	285.09	2659.82
						4/17/08	281.52	2663.39
						7/24/08	282.42	2662.49
						10/23/08	285.03	2659.88
						1/22/09	281.38	2663.53
						5/13/09	282.35	2662.56
						10/27/09	284.70	2660.21
						4/27/10	276.49	2668.42
						12/10/10	278.31	2666.60
						5/24/11	278.21	2666.70
						11/21/11	280.98	2663.93
						6/18/12	281.66	2663.25
						11/6/12	286.84	2658.07
						6/13/13	292.47	2652.44

TABLE 3
Compilation of Groundwater Elevation Data

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-2007-6A	907607	Sierrita	3521842.050	498367.161	3043.37	10/2/07	303.60	2739.77
						1/22/08	303.27	2740.10
						4/18/08	304.02	2739.35
						7/24/08	305.81	2737.56
						10/23/08	307.85	2735.52
						1/22/09	305.87	2737.50
						4/2/09	304.87	2738.50
						7/22/09	307.15	2736.22
						10/26/09	307.00	2736.37
						3/11/10	306.15	2737.22
						4/21/10	306.44	2736.93
						8/10/10	309.12	2734.25
						10/26/10	308.95	2734.42
						1/18/11	307.78	2735.59
						5/5/11	308.13	2735.24
						7/7/11	309.90	2733.47
						10/6/11	311.10	2732.27
						1/11/12	311.24	2732.13
						6/12/12	314.95	2728.42
						8/13/12	317.93	2725.44
						10/18/12	316.94	2726.43
MO-2007-6B	907606	Sierrita	3521849.495	498367.887	3043.05	1/8/13	321.98	2721.39
						4/9/13	323.05	2720.32
						7/10/13	326.23	2717.14
						10/4/07	319.17	2723.88
						1/21/08	314.78	2728.27
						4/17/08	314.75	2728.30
						7/24/08	317.04	2726.01
						10/23/08	318.17	2724.88
						1/22/09	316.58	2726.47
						4/2/09	316.05	2727.00
						7/22/09	317.49	2725.56
						10/26/09	319.37	2723.68
						3/11/10	316.58	2726.47
						4/21/10	316.64	2726.41
						8/10/10	318.40	2724.65
						10/26/10	318.66	2724.39
						1/18/11	317.52	2725.53
						5/5/11	317.00	2726.05
						7/7/11	318.58	2724.47
						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	6/12/12	325.69	2717.36
						8/13/12	329.12	2713.93
						10/18/12	332.52	2710.53
						1/8/13	333.92	2709.13
						4/9/13	335.80	2707.25
						7/10/13	337.52	2705.53
						6/2/09	226.35	2664.43
						7/29/09	222.46	2668.32
						11/3/09	225.90	2664.88
						1/25/10	212.26	2678.52
						4/20/10	219.94	2670.84
						8/10/10	227.88	2662.90
						12/15/10	215.16	2675.62
						2/2/11	214.99	2675.79
						6/16/11	226.45	2664.33
						8/31/11	223.97	2666.81
						12/1/11	219.96	2670.82
						1/11/12	222.55	2668.23
						5/9/12	225.63	2665.15
						8/15/12	234.23	2656.55
						11/29/12	229.30	2661.48
						1/8/13	229.63	2661.15
						4/10/13	233.98	2656.80
						7/11/13	238.53	2652.25
						8/27/13	360.56	2530.22

TABLE 3
Compilation of Groundwater Elevation Data

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)
NP-2	605898	HGC	3528517.116	500582.904	2906.56	6/7/07	138.00	2768.56
						8/13/07	156.00	2750.56
						11/6/07	355.10	2551.46
						1/11/08	353.67	2552.89
						4/17/08	352.20	2554.36
						7/11/08	355.10	2551.46
						10/9/08	356.24	2550.32
						2/9/09	355.00	2551.56
						4/24/09	354.80	2551.76
						9/22/09	358.90	2547.66
						12/31/09	358.57	2547.99
						2/17/10	357.20	2549.36
						4/22/10	356.38	2550.18
						8/5/10	357.93	2548.63
						10/25/10	360.80	2545.76
						1/19/11	358.68	2547.88
						5/3/11	358.30	2548.26
						7/18/11	359.72	2546.84
						12/5/11	360.27	2546.29
						3/21/12	358.10	2548.46
PZ-7	561870	Sierrita	3526357.485	492533.171	3549.17	6/18/12	359.28	2547.28
						8/15/12	360.45	2546.11
						11/29/12	360.79	2545.77
						2/20/13	356.92	2549.64
						6/17/13	358.19	2548.37
						8/27/13	360.56	2546.00
						11/16/06	139.55	3409.62
						1/12/07	139.50	3409.67
						4/9/07	139.65	3409.52
						7/24/07	139.76	3409.41
						10/16/07	139.49	3409.68
						1/7/08	139.25	3409.92
						4/28/08	139.59	3409.58
						7/11/08	139.71	3409.46
						10/14/08	139.73	3409.44
PZ-8	561866	Sierrita	3524196.243	492972.681	3480.36	2/9/09	139.79	3409.38
						4/6/09	139.80	3409.37
						4/23/10	140.22	3408.95
						5/18/11	140.62	3408.55
						6/6/12	136.67	3412.50
						6/10/13	136.91	3412.26
						11/14/06	206.30	3274.06
						1/10/07	207.42	3272.94
						4/17/07	198.52	3281.84
						7/12/07	209.46	3270.90
						10/5/07	205.30	3275.06
						1/3/08	212.94	3267.42
						4/8/08	217.43	3262.93
						7/1/08	221.70	3258.66
						10/8/08	222.49	3257.87
						1/8/09	223.63	3256.73
						4/8/09	224.72	3255.64
						4/20/10	227.87	3252.49
						4/19/11	228.73	3251.63
						4/25/12	229.66	3250.70
						6/10/13	230.86	3249.50

TABLE 3
Compilation of Groundwater Elevation Data

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)
TMM-1	616156	HGC	3529736.231	500018.323	2967.08	6/18/07	432.50	2534.58
						6/19/07	432.00	2535.08
						10/4/07	437.58	2529.50
						1/10/08	435.75	2531.33
						4/18/08	433.30	2533.78
						7/9/08	437.37	2529.71
						10/9/08	439.80	2527.28
						2/4/09	436.62	2530.46
						4/21/09	433.35	2533.73
						10/14/09	444.00	2523.08
						4/20/10	436.99	2530.09
						10/6/10	442.98	2524.10
						4/21/11	437.13	2529.95
						12/21/11	435.50	2531.58
						5/15/12	438.57	2528.51
						11/23/12	443.30	2523.78
						6/19/13	439.14	2527.94

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

ND = No elevation data

NR = No record

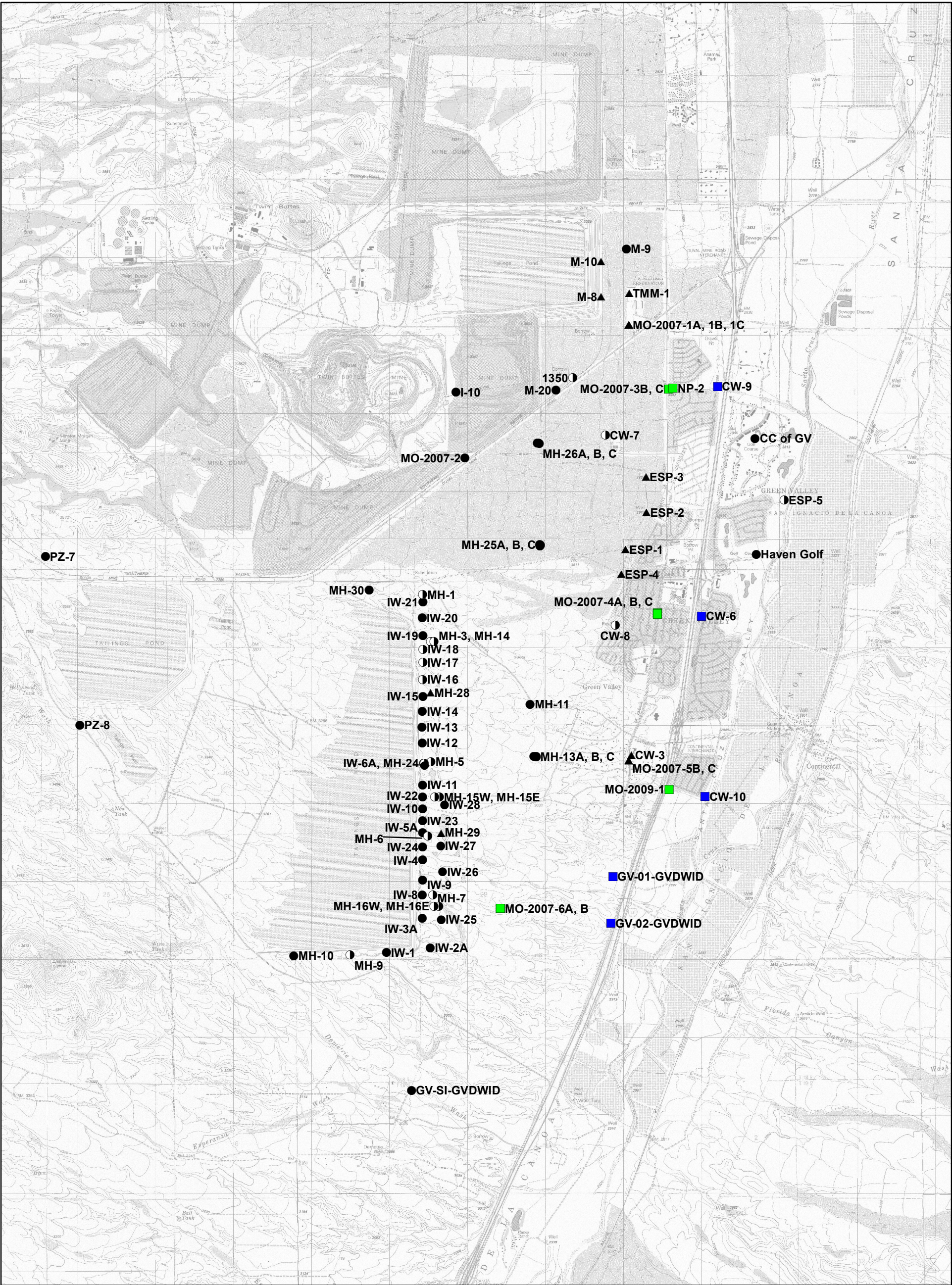
Sierrita = Freeport-McMoRan Sierrita Inc.

TBPI = Twin Buttes Properties, Inc.

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

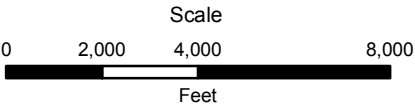
¹ = Water level measurement was collected under dynamic conditions

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



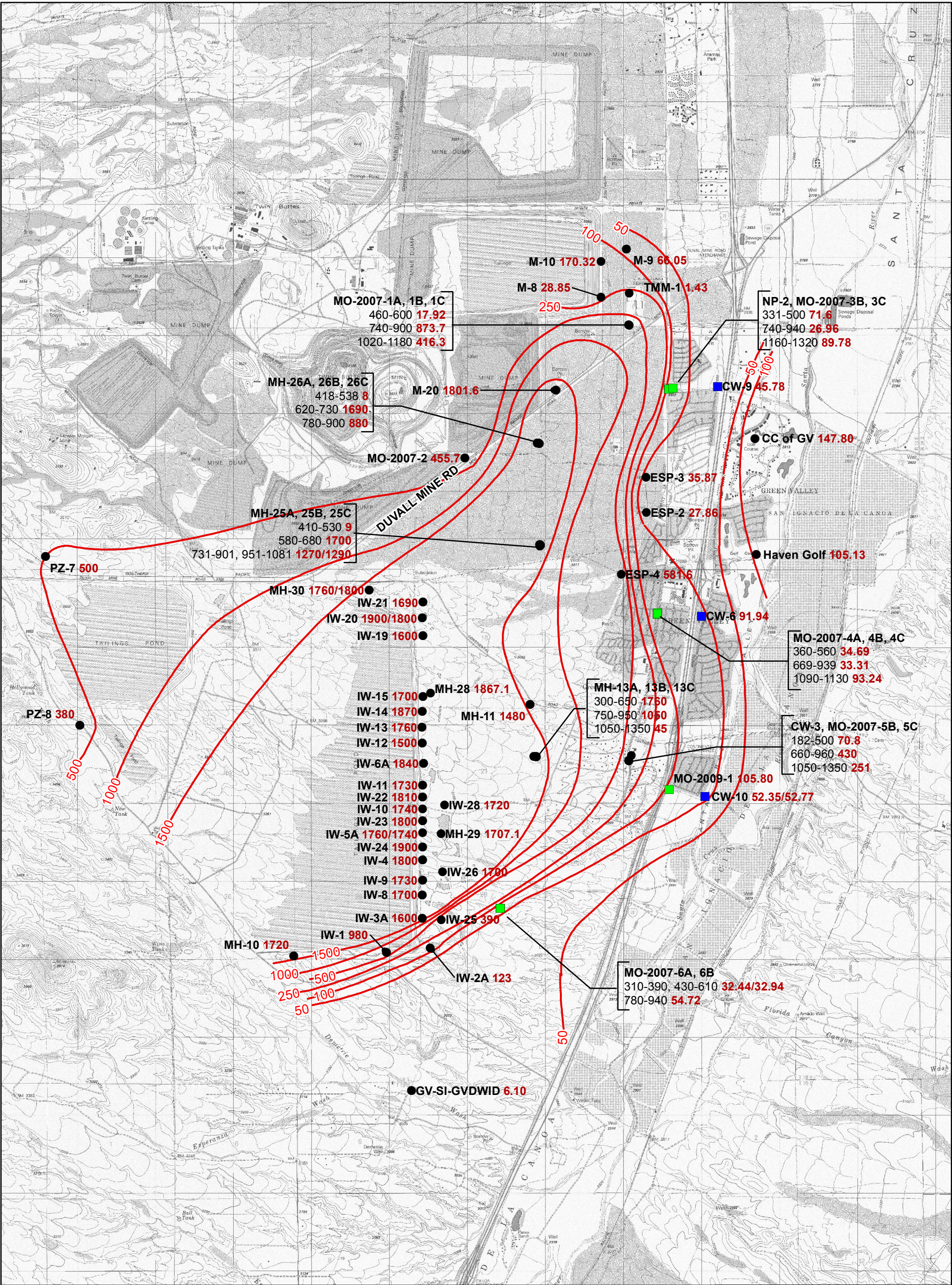
Date
07/03/13

File ID
055039-006B



**CLEAR
CREEK
ASSOCIATES**

FIGURE 1
Sampling Locations for
Pre-Implementation Groundwater
Monitoring



Legend

Sulfate Concentration Contour (mg/L)

●

IW-10

Well ID

1740

Sulfate Concentration (mg/L)

Duplicate results separated by "/"

Co-Located Wells

S

Screened Interval (ft bls):

Sulfate Concentration (mg/L)

Well Symbols

●

Well

■

Sentinel Well

■

Drinking Water Supply Well

0

2,000

4,000

8,000

Scale

Feet

Notes:

Projection:UTM NAD83 Zone 12N

Date

07/09/13

File ID

055039-082

N

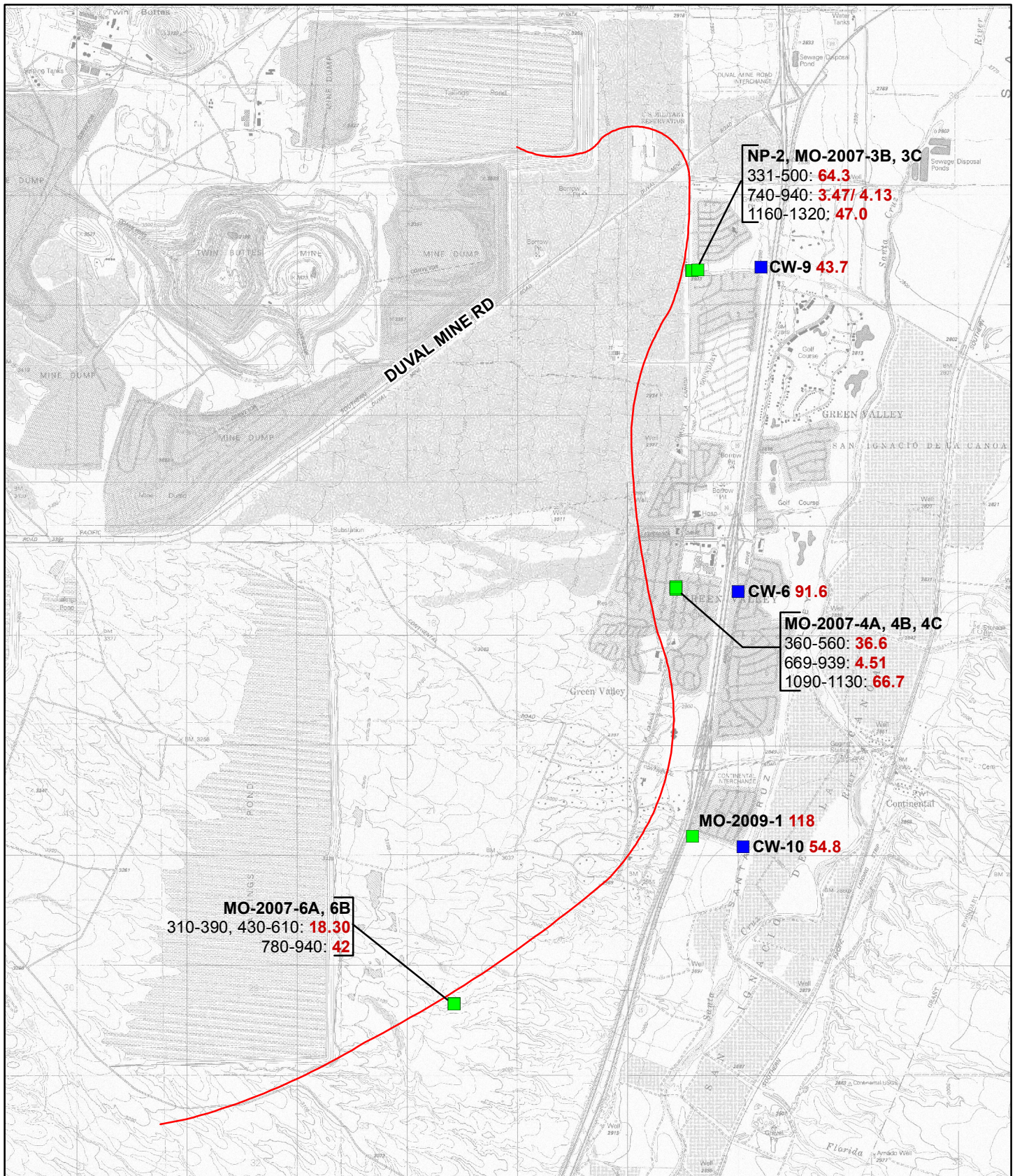
CLEAR CREEK ASSOCIATES

FIGURE 2

Sulfate Concentrations

in Groundwater

Second Quarter 2013



Legend

— 250 mg/L Sulfate Concentration Contour

■ Well ID

■ CW-9 43.7 Sulfate Concentration (mg/L)

— Duplicate Results Separated by "/"

■ Well Symbols

■ Water Supply Well

■ Sentinel Well

Co-Located Wells

— Screened Interval (ft bls): Sulfate Concentration (mg/L)

0 2,000 4,000

Feet



CLEAR CREEK ASSOCIATES

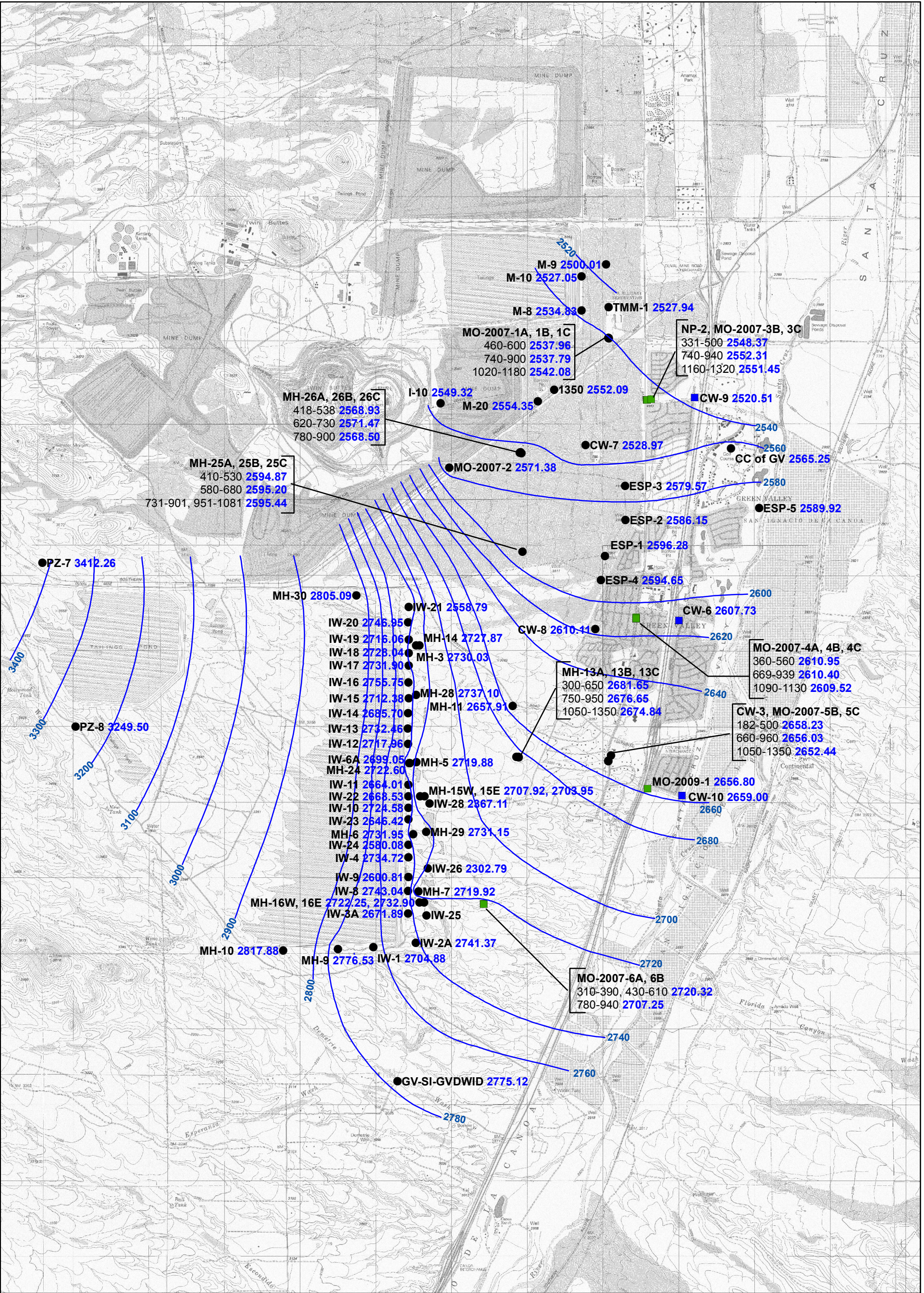
File ID 055039-090

Date 8/29/13

FIGURE 3

Sulfate Concentrations in Groundwater

Third Quarter 2013



Legend

Groundwater Elevation Contour (ft amsl)

● CW-9 Well ID
2520.51 Groundwater Elevation (ft amsl)

Co-Located Wells
— [Screened Interval (ft bls): Groundwater Elevation (ft amsl)]

NOTE:
The groundwater elevation contour intervals are irregular.

0 2,000 4,000 8,000
Feet

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

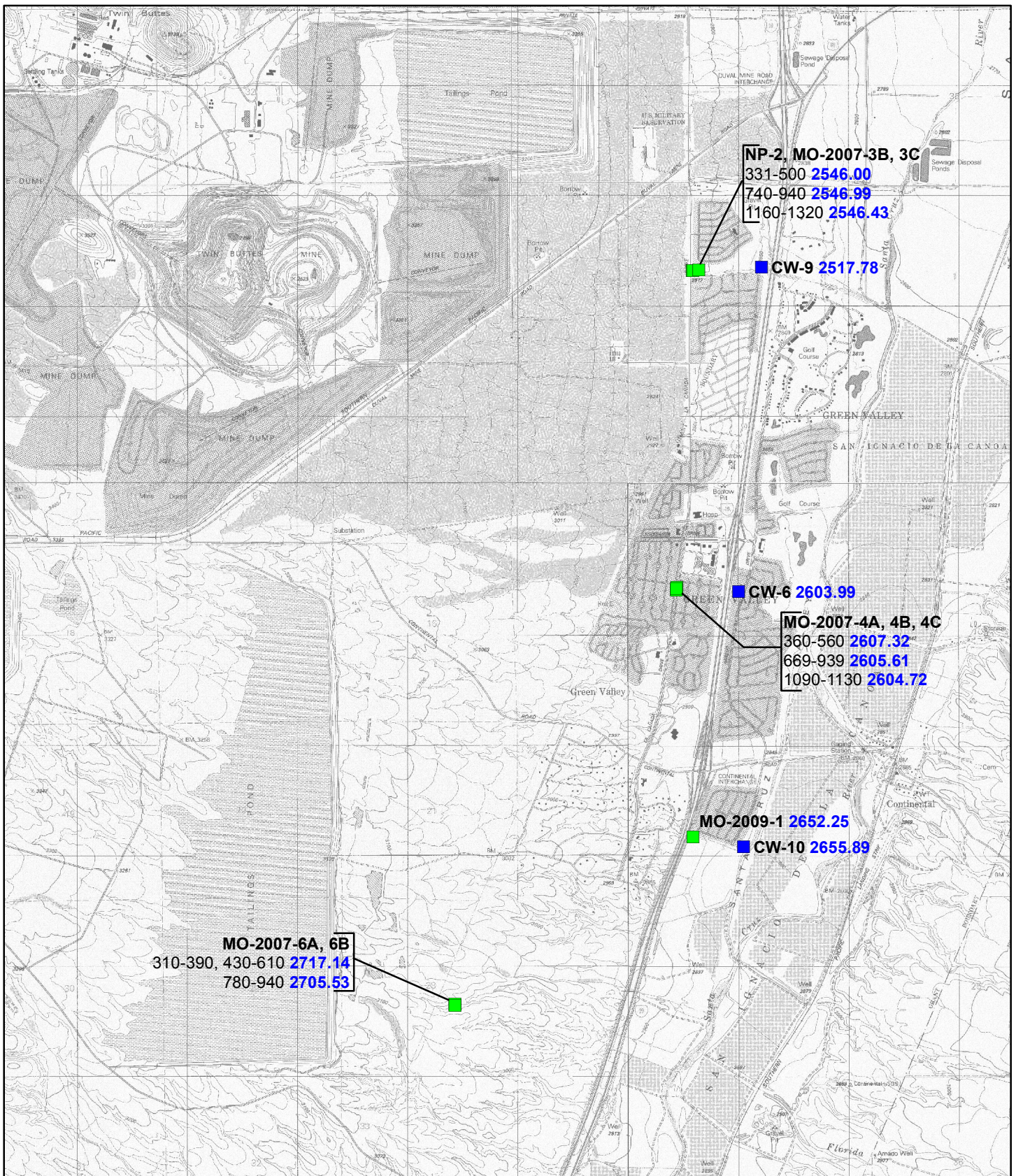
↑ N

CLEAR CREEK ASSOCIATES

File ID
055039-083

Date
07/01/13

FIGURE 4
Groundwater Elevations
Second Quarter 2013



Legend

CW-9 Well ID
2517.78 Groundwater Elevation (ft amsl)

Well Symbols
 ■ Water Supply Well
 ■ Sentinel Well

0 2,000 4,000
 Feet

CLEAR CREEK ASSOCIATES

File ID 055039-091
 Date 8/29/13

Co-Located Wells

— Screened Interval (ft bls): **Groundwater Elevation (ft amsl)**



FIGURE 5
 Groundwater Elevations
 Third Quarter 2013

APPENDIX A
DATA VERIFICATION REPORT

APPENDIX A
DATA VERIFICATION REPORT

Prepared for:

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Prepared by:

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October 21, 2013

TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	LABORATORY QUALITY CONTROL.....	3
2.1	Licensure.....	3
2.2	Analytical Methods.....	3
2.3	Method Detection Limits (MDLs) and Practical Quantification Limits (PQLs)....	3
2.4	Timeliness	4
2.5	Quality Control Measurements	4
2.5.1	Preparation Blanks, Calibration Blanks, and Calibration Verification Standards.....	4
2.5.2	Analytical Spikes and Analytical Spike Duplicates.....	5
2.5.3	Laboratory Control Samples	5
2.5.4	Laboratory Duplicate Samples.....	5
3.	DATA QUALITY INDICATORS	8
3.1	Precision.....	8
3.2	Bias	9
3.3	Accuracy	9
3.4	Representativeness.....	10
3.5	Comparability	10
3.6	Completeness	10
3.7	Sensitivity	10
4.	REFERENCES	11

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the second and third quarters 2013 by Freeport-McMoRan Sierrita Inc. (Sierrita) pursuant to the Mitigation Order on Consent Docket No. P-50-06. All analytical results for groundwater samples collected during this reporting period were provided to Sierrita by ACZ Laboratories, Inc. (ACZ) for preparation of the Semiannual Groundwater Monitoring Report.

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

Appendix B of the main text of this report contains laboratory reports for samples collected by Sierrita, including Chain of Custody (COC) forms, laboratory correspondence, QC summaries, data qualifiers, and any case narratives. The analytical results for all 110 samples collected are contained in 22 reports with the ACZ Project numbers 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 any modifications to be made regarding the usability and data validation status of the laboratory test results.

ACZ Project ID	Wells Reported
Second Quarter 2013 Number of wells sampled: 71 Number of well samples collected (including duplicates and multiple samples from one well): 80 Number of duplicate samples collected: 6 Number of reanalyzed samples: 4 Total number of analyses: 84	
L11462	MH-28, MH-29
L11464	MH-13B, MH-13A, MH-13C, MH-25B, MH-25A, MH-25C, MH-26C, MH-26B, MH-26A, DUP20130403A
L11560	MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-2, MO-2007-3B, MO-2007-3C, MO-2007-6A, MO-2007-6B, DUP20130409A, MO-2007-4B, MO-2007-4A, MO-2007-4C, MO-2009-1
L11669	M-10, M-8
L11670	IW-1, IW-2A, IW-25, IW-9, IW-26, IW-4, IW-24, IW-5A, IW-23, IW-10, IW-28, IW-22, IW-11, IW-6A, IW-13, IW-14, IW-21, DUP20130415A
L11775	M-20, MH-11
L11886	M-9
L11989	HAVENGOLF
L12127	CCGV, IW-3A, IW-8, IW-12, IW-15, IW-19, CW-10, CW-6, CW-9, DUP20130515A,
L12128	GV-1, GV-2, SIWELL
L12157	MO-2007-1C, MO-2007-3B, M-8 (RERUNS)
L12188	M-8, MO-2007-3B (RESAMPLES)
L12268	ESP-2, ESP-4, ESP-3
L12553	MH-30, DUP20130606A
L12705	PZ-7, MH-10, PZ-8, MO-2007-5B, MO-2007-5C, CW-3
L12808	CCGV (RERUNS)
L12833	NP-2, IW-20, DUP20130617A, TMM-1
L13140	MH-27
Third Quarter 2013 Number of wells sampled: 14 Number of well samples collected (including duplicates and multiple samples from one well): 16 Number of duplicate samples collected: 2 Number of reanalyzed samples: 3 Total number of analyses: 19	
L13273	MO-2007-4B, MO-2007-4C, MO-2007-4A, MO-2007-6A, MO-2007-6B, GV-1, GV-2, MO-2009-1, DUP20130711A
L13390	CW-10, CW-6, CW-9
L14121	NP-2, MO-2007-3B, MO-2007-3C, DUP20130827A
L13569	MO-2007-4B, MO-2007-4C, MO-2007-6A (RERUNS)

2. LABORATORY QUALITY CONTROL

As specified in the QAPP, laboratory QC was maintained for all analyses 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 are discussed in the following subsections.

The review of laboratory QC included a review to identify any qualified data and an assessment of 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 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 28 day holding time specified by each of the methods used for analysis. Three samples M-8, MO-2007-1C, and CC of GV, were analyzed a second time outside of the 28 day holding time but are not reported in the main report. One sample, MO-2007-3B was re-analyzed outside of the 28 day holding time and is reported in the main text. A confirmation sample was collected at MO-2007-3B and is used for interpretation of the results.

2.5 Quality Control Measurements

The following laboratory QC samples were prepared and analyzed:

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

2.5.1 Preparation Blanks, Calibration Blanks, and Calibration Verification Standards

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

Initial calibration blanks and initial calibration verification standards were analyzed prior to each group of samples. The results for 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 analyzed. The spike samples were prepared by adding a sulfate spike to one randomly chosen sample out of every ten samples analyzed. Spike recoveries for most analyses were between 90 and 110 percent. Instances in which analytical spike recoveries were high, low or unusable are qualified with an “M1”, “M2”, or “M3” flag, respectively. The “M1” flag was used on reports L11464, L11560, L11669, L11775, and L13390. The “M2” qualifier was used on reports L11670 and L12705. The “M3” qualifier was used on reports L11462, L11464, L11670, L11775, L12127, L12705, L12833, and L13140. In all cases where a qualifier was used, the method control sample recovery was checked to ensure that it was 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 analytical method. 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 data verification report. Field duplicate samples are discussed in Section 3.1. The relative percent difference (RPD) for all laboratory duplicate samples were within 20 percent, which is the tolerance range set by the laboratory. The RPD was not used for data validation if the sample concentration was 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.

In the second quarter 2013, two samples were each analyzed three times due to an error on the chain of custody form. The samples, MH-28 and MH-29, were analyzed twice using ATSM Method D516-02 and once using EPA method 300.0. The results are shown below.

ACZ Project No.	Well ID	Analysis 1 (mg/L) D516-02	Analysis 2 (mg/L) D516-02	Analysis 3 (mg/L) 300.0	RPD 1 and 2	RPD 1 and 3	RPD 2 and 3
L11462	MH-28	1850	1870	1867.1	1.08%	0.92%	0.16%
L11462	MH-28	1730	1670	1707.1	3.53%	1.33%	2.20%

The samples can be treated like laboratory duplicate samples because the laboratory completed multiple analyses on the same sample. There is also an opportunity to compare results from the same sample across the two methods used for MO sampling. The range of RPD values was 0.16% to 3.53%, all within the 20 percent acceptance criteria for laboratory duplicates. The analyses demonstrate appropriate levels of precision for laboratory analysis.

2.5.5 Sample Re-Analysis and Confirmation Samples

During the second and third quarters 2013, seven field samples were re-analyzed by ACZ at the request of Sierrita and two confirmation samples were collected based on comparison to historical results. Re-analysis is completed by conducting additional analysis on an existing sample using the same sample preparation and method for analysis. Confirmation samples are discrete samples collected from the well in a separate sampling event than the original sample. The results are shown on the table below.

Well ID	Sample (mg/l)	Re-Analysis (mg/l)	Confirmation Sample	Sample - Re-analysis RPD	Confirmation Sample RPD
CC of GV	147.80	129	NONE	13.04%	NONE
M-8	138.89	140.61	28.85	1.23%	131.90%
MO-2007-1C	416.3	425.0	NONE	2.07%	NONE
MO-2007-3B	180.87	37.54	29.96	131.25%	23.65%
MO-2007-4B	4.51	4.53	NONE	0.44%	NONE
MO-2007-4C	66.7	65.6	NONE	1.66%	NONE
MO-2007-6A	18.3	19.1	NONE	4.28%	NONE

The re-analysis at CC of GV, MO-2007-1C, MO-2007-4B, MO-2007-4C, and MO-2007-6A confirmed the results of the first analysis and the first analysis was used on tables and figures in the main text. The re-analysis at M-8 confirmed the first analysis but a confirmation sample indicates the first sample is probably anomalous. The results for the reanalysis and the confirmation sample are shown on tables and the confirmation sample result is shown on figures. The re-analysis at MO-2007-3B did not confirm the initial results. The confirmation sample at MO-2007-3B confirms the second analysis. The second analysis and the confirmation sample are shown on table and the confirmation sample result is shown on figures. All of the results will be confirmed by future samples.

3. DATA QUALITY INDICATORS

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

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

Each of the DQIs are 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 of the analytical results 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, eight field duplicate samples were collected by Sierrita for filtered sulfate analysis. Six were collected in the second quarter 2013 (DUP20130403A, DUP20130409A, DUP20130415A, DUP20130515A, DUP20130606A, and DUP20130617A) and two were collected in the third quarter 2013 (DUP20130711A and DUP20130827A). The collection of six field duplicate samples in the second quarter 2013 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. As a corrective action, Clear Creek will review the QA/QC goals for duplicate samples with Sierrita. The collection of two field duplicate samples in third quarter 2013 does meet the QA/QC goal of collecting one duplicate for every ten groundwater samples collected.

Results of the field duplicate samples collected are provided in the table below. The range of RPD values was 0.24 to 17.37 percent, all within the 20 percent acceptance criteria for field duplicates, as stated in Section 3.3.1 of the QAPP. Overall, the DQI for precision is met.

ACZ Project No.	Well ID	Duplicate ID	Sample (mg/l)	Duplicate (mg/l)	RPD
L11464	MH-25C	DUP20130403A	1270	1290	1.56%
L11569	MO-2007-6A	DUP20130409A	32.44	32.94	1.53%
L11670	IW-5A	DUP20130415A	1760	1740	1.14%
L12127	CW-10	DUP20130515A	52.35	52.77	0.80%
L12553	MH-30	DUP20130606A	1760	1800	2.25%
L12833	IW-20	DUP20130617A	1900	1800	5.41%
L13273	GV-01-GVDWID	DUP20130711A	42.60	42.5	0.24%
L14121	MO-2007-3B	DUP21030827A	3.47	4.13	17.37

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 was managed in this dataset through 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 determined 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 sufficient for the purpose of aquifer characterization.

3.4 Representativeness

All well samples were taken from locations specified in the Pre-implementation Monitoring Plan (Sierrita, 2009) using sampling procedures specified in the QAPP. Therefore, the samples provide a good representation of groundwater quality at the locations. The analytical data are representative of groundwater conditions because the analyses were conducted using 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 satisfy the QA/QC criteria for this project and are 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

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

April 30, 2013

Cc: Ben Daigneau

Project ID: ZS000003Q8
ACZ Project ID: L11462– **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 05, 2013. This project was assigned to ACZ's project number, **L11462**. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L11462**. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-28

ACZ Sample ID: **L11462-01**

Date Sampled: 04/02/13 13:09

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1850		*	mg/L	50	300	04/11/13 14:53	lhb

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-28

ACZ Sample ID: **L11462-02**

Date Sampled: 04/02/13 13:09

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1867.1		*	mg/L	25	125	04/24/13 18:29	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-28

ACZ Sample ID: **L11462-03**

Date Sampled: 04/02/13 13:09

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1870		*	mg/L	50	300	04/11/13 14:53	lhb

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-29

ACZ Sample ID: **L11462-04**

Date Sampled: 04/02/13 15:21

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1730		*	mg/L	50	300	04/11/13 14:53	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-29

ACZ Sample ID: **L11462-05**

Date Sampled: 04/02/13 15:21

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1707.1		*	mg/L	25	125	04/24/13 18:46	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-29

ACZ Sample ID: **L11462-06**

Date Sampled: 04/02/13 15:21

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1670		*	mg/L	50	300	04/15/13 16:18	tcd

Arizona license number: AZ0102


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Alkalinity as CaCO₃

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341864													
WG341864PBW1	PBW	04/10/13 17:53				U	mg/L		-20	20			
WG341864LCSW2	LCSW	04/10/13 18:07	WC130328-	820		750.7	mg/L	91.5	90	110			
WG341864LCSW5	LCSW	04/10/13 21:28	WC130328-	820		767.2	mg/L	93.6	90	110			
WG341864PBW2	PBW	04/10/13 21:36				U	mg/L		-20	20			
L11478-08DUP	DUP	04/11/13 0:13			265	248.4	mg/L				6.5	20	
WG341864LCSW8	LCSW	04/11/13 0:26	WC130328-	820		770.4	mg/L	94	90	110			
WG341864PBW3	PBW	04/11/13 0:35				2.1	mg/L		-20	20			
WG341864LCSW11	LCSW	04/11/13 3:56	WC130328-	820		785.3	mg/L	95.8	90	110			
WG341864PBW4	PBW	04/11/13 4:05				U	mg/L		-20	20			
WG341864LCSW14	LCSW	04/11/13 7:25	WC130328-	820		797.5	mg/L	97.3	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		2.021	mg/L	101.1	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.09	0.09			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	1		1.049	mg/L	104.9	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	1	U	1.14	mg/L	114	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	1	U	1.131	mg/L	113.1	85	115	0.79	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.02		.02188	mg/L	109.4	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0012	0.0012			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.01		.00906	mg/L	90.6	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.01	U	.00922	mg/L	92.2	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.01	U	.00937	mg/L	93.7	70	130	1.61	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.02		.02078	mg/L	103.9	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0012	0.0012			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.01		.00995	mg/L	99.5	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.01	U	.01044	mg/L	104.4	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.01	U	.01046	mg/L	104.6	70	130	0.19	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.0515	mg/L	103	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0006	0.0006			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.05005		.04672	mg/L	93.3	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.05005	U	.05375	mg/L	107.4	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.05005	U	.05131	mg/L	102.5	70	130	4.64	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05227	mg/L	104.5	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0006	0.0006			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.0479	mg/L	95.7	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	.0032	.05047	mg/L	94.4	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	.0032	.05176	mg/L	97	70	130	2.52	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.953	mg/L	97.7	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.009	0.009			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.4992	mg/L	99.8	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	.05	.5591	mg/L	101.8	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	.05	.5591	mg/L	101.8	85	115	0	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.04981	mg/L	99.6	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.00015	0.00015			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.0501		.04538	mg/L	90.6	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.0501	.00014	.04274	mg/L	85	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.0501	.00014	.04175	mg/L	83.1	70	130	2.34	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.04487	mg/L	89.7	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.00015	0.00015			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.0501		.04255	mg/L	84.9	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.0501	U	.04542	mg/L	90.7	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.0501	U	.04717	mg/L	94.2	70	130	3.78	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.05162	mg/L	103.2	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0003	0.0003			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.0501		.04521	mg/L	90.2	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.0501	.0011	.04546	mg/L	88.5	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.0501	.0011	.04426	mg/L	86.1	70	130	2.67	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05044	mg/L	100.9	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.0501		.04654	mg/L	92.9	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.0501	U	.04527	mg/L	90.4	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.0501	U	.04603	mg/L	91.9	70	130	1.66	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	100		97.75	mg/L	97.8	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.6	0.6			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	67.95918		72.62	mg/L	106.9	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	67.95918	599	650.5	mg/L	75.8	85	115			M3
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	67.95918	599	642.1	mg/L	63.4	85	115	1.3	20	M3

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341899													
WG341899ICB	ICB	04/11/13 10:50				U	mg/L		-3	3			
WG341899ICV	ICV	04/11/13 10:50	WI130131-1	54.945		58.3	mg/L	106.1	90	110			
WG341899LFB1	LFB	04/11/13 11:20	WI130201-8	30		31.8	mg/L	106	90	110			
WG341899LFB2	LFB	04/11/13 11:24	WI130201-8	30		32.1	mg/L	107	90	110			
L11461-04AS	AS	04/11/13 11:43	10XCL	30	140	167	mg/L	90	90	110			
L11462-03DUP	DUP	04/11/13 11:43			140	135	mg/L				3.6	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.963	mg/L	98.2	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.514	mg/L	102.8	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	U	.498	mg/L	99.6	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	U	.497	mg/L	99.4	85	115	0.2	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2.002		2.008	mg/L	100.3	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.495	mg/L	99	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	U	.491	mg/L	98.2	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	U	.479	mg/L	95.8	85	115	2.47	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341864													
WG341864LCSW1	LCSW	04/10/13 17:56	PCN41036	1408.8		1421.1	µmhos/crr	100.9	90	110			
WG341864LCSW4	LCSW	04/10/13 21:17	PCN41036	1408.8		1413	µmhos/crr	100.3	90	110			
L11478-08DUP	DUP	04/11/13 0:13			3930	3930	µmhos/crr				0	20	
WG341864LCSW7	LCSW	04/11/13 0:15	PCN41036	1408.8		1402.8	µmhos/crr	99.6	90	110			
WG341864LCSW10	LCSW	04/11/13 3:44	PCN41036	1408.8		1394.7	µmhos/crr	99	90	110			
WG341864LCSW13	LCSW	04/11/13 7:13	PCN41036	1408.8		1386.6	µmhos/crr	98.4	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.95	mg/L	97.5	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.497	mg/L	99.4	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	U	.52	mg/L	104	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	U	.517	mg/L	103.4	85	115	0.58	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341866													
WG341866ICV	ICV	04/10/13 16:28	WI130405-7	.3		.2968	mg/L	98.9	90	110			
WG341866ICB	ICB	04/10/13 16:29				U	mg/L		-0.003	0.003			
WG341872													
WG341831LRB	LRB	04/10/13 18:08				U	mg/L		-0.003	0.003			
WG341831LFB	LFB	04/10/13 18:09	WI130405-2	.2		.2013	mg/L	100.7	90	110			
L11461-02DUP	DUP	04/10/13 18:10			.004	U	mg/L				200	20	RA
L11461-04LFM	LFM	04/10/13 18:12	WI130405-2	.2	.05	.2302	mg/L	90.1	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341906													
WG341906ICV	ICV	04/11/13 12:41	WC130410-	2.002		1.96	mg/L	97.9	95	105			
WG341906ICB	ICB	04/11/13 12:49				U	mg/L		-0.3	0.3			
WG341906LFB1	LFB	04/11/13 13:03	WC130313-	5.005		4.75	mg/L	94.9	90	110			
L11372-01AS	AS	04/11/13 13:09	WC130313-	5.005	.6	5.32	mg/L	94.3	90	110			
L11372-01DUP	DUP	04/11/13 13:16			.6	.57	mg/L				5.1	20	RA
L11462-04AS	AS	04/11/13 14:11	WC130313-	5.005	.2	4.69	mg/L	89.7	90	110			
L11462-04DUP	DUP	04/11/13 14:18			.2	.22	mg/L				9.5	20	RA
WG341906LFB2	LFB	04/11/13 15:18	WC130313-	5.005		4.65	mg/L	92.9	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		2.006	mg/L	100.3	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.06	0.06			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	1		1.036	mg/L	103.6	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	1	1.33	2.284	mg/L	95.4	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	1	1.33	2.265	mg/L	93.5	85	115	0.84	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.05152	mg/L	103	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0003	0.0003			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.05005		.04423	mg/L	88.4	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.05005	U	.04621	mg/L	92.3	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.05005	U	.04584	mg/L	91.6	70	130	0.8	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.04908	mg/L	98.2	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.04494	mg/L	89.8	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.04767	mg/L	95.2	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.04854	mg/L	97	70	130	1.81	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	100		100.8	mg/L	100.8	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.6	0.6			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	49.99941		52.42	mg/L	104.8	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	49.99941	117	168.2	mg/L	102.4	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	49.99941	117	167.1	mg/L	100.2	85	115	0.66	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.9138	mg/L	95.7	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.015	0.015			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.5084	mg/L	101.7	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	.052	.5572	mg/L	101	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	.052	.553	mg/L	100.2	85	115	0.76	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341718													
WG341718ICV	ICV	04/09/13 11:54	II130325-2	.005025		.0048	mg/L	95.5	95	105			
WG341718ICB	ICB	04/09/13 11:57				U	mg/L		-0.0002	0.0002			
WG341718LRB	LRB	04/09/13 11:59				U	mg/L		-0.00044	0.00044			
WG341718LFB	LFB	04/09/13 12:01	II130320-2	.002002		.00194	mg/L	96.9	85	115			
L11462-03LFM	LFM	04/09/13 12:42	II130320-2	.002002	U	.00195	mg/L	97.4	85	115			
L11462-03LFMD	LFMD	04/09/13 12:44	II130320-2	.002002	U	.00193	mg/L	96.4	85	115	1.03	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.974	mg/L	98.7	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.06	0.06			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.497	mg/L	99.4	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	.02	.549	mg/L	105.8	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	.02	.533	mg/L	102.6	85	115	2.96	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341818													
WG341818ICV	ICV	04/10/13 9:37	II130114-3	2		1.963	mg/L	98.2	95	105			
WG341818ICB	ICB	04/10/13 9:41				U	mg/L		-0.03	0.03			
WG341818LFB	LFB	04/10/13 9:53	II130326-2	.5		.489	mg/L	97.8	85	115			
L11462-03AS	AS	04/10/13 10:08	II130326-2	.5	.01	.511	mg/L	100.2	85	115			
L11462-03ASD	ASD	04/10/13 10:11	II130326-2	.5	.01	.502	mg/L	98.4	85	115	1.78	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.04932	mg/L	98.6	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0018	0.0018			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.05005		.04583	mg/L	91.6	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.05005	.0027	.04189	mg/L	78.3	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.05005	.0027	.04027	mg/L	75.1	70	130	3.94	20	

WG341927

WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.04999	mg/L	100	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0018	0.0018			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.047	mg/L	93.9	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.03857	mg/L	77.1	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.03957	mg/L	79.1	70	130	2.56	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
WG342144													
WG342144ICV	ICV	04/16/13 22:11	WI130411-3	2.416		2.302	mg/L	95.3	90	110			
WG342144ICB	ICB	04/16/13 22:12				U	mg/L		-0.06	0.06			
WG342150													
WG342150LFB1	LFB	04/16/13 23:15	WI130215-3	2		1.988	mg/L	99.4	90	110			
L11461-01AS	AS	04/16/13 23:18	WI130215-3	2	1.34	3.213	mg/L	93.7	90	110			
L11461-02DUP	DUP	04/16/13 23:20			1.32	1.314	mg/L				0.5	20	
WG342150LFB2	LFB	04/16/13 23:50	WI130215-3	2		1.955	mg/L	97.8	90	110			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341864													
WG341864LCSW3	LCSW	04/10/13 18:11	PCN40853	6		6.01	units	100.2	98	102			
WG341864LCSW6	LCSW	04/10/13 21:31	PCN40853	6		6.02	units	100.3	98	102			
L11478-08DUP	DUP	04/11/13 0:13			8.3	8.34	units				0.5	20	
WG341864LCSW9	LCSW	04/11/13 0:29	PCN40853	6		6.01	units	100.2	98	102			
WG341864LCSW12	LCSW	04/11/13 4:00	PCN40853	6		6.01	units	100.2	98	102			
WG341864LCSW15	LCSW	04/11/13 7:28	PCN40853	6		6.02	units	100.3	98	102			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	20		19.8	mg/L	99	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.9	0.9			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	99.97161		104	mg/L	104	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	99.97161	9	118.7	mg/L	109.7	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	99.97161	9	119	mg/L	110	85	115	0.25	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341646													
WG341646PBW	PBW	04/05/13 16:40				U	mg/L		-20	20			
WG341646LCSW	LCSW	04/05/13 16:40	PCN40254	260		242	mg/L	93.1	80	120			
L11462-03DUP	DUP	04/05/13 16:59			3150	3190	mg/L				1.3	20	
WG341647													
WG341647PBW	PBW	04/05/13 17:01				U	mg/L		-20	20			
WG341647LCSW	LCSW	04/05/13 17:01	PCN40254	260		250	mg/L	96.2	80	120			
L11465-01DUP	DUP	04/05/13 17:11			790	786	mg/L				0.5	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.05262	mg/L	105.2	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0003	0.0003			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.05005		.04634	mg/L	92.6	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.05005	.0003	.05592	mg/L	111.1	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.05005	.0003	.05675	mg/L	112.8	70	130	1.47	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05209	mg/L	104.2	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.04455	mg/L	89	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.04761	mg/L	95.1	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.05186	mg/L	103.6	70	130	8.55	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	100		99.83	mg/L	99.8	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.9	0.9			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	100.0416		102	mg/L	102	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	100.0416	162	264.2	mg/L	102.2	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	100.0416	162	265.2	mg/L	103.2	85	115	0.38	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341914													
WG341914ICB	ICB	04/11/13 13:33				U	mg/L		-3	3			
WG341914ICV	ICV	04/11/13 13:33	WI130401-1	20		20	mg/L	100	90	110			
WG341914LFB	LFB	04/11/13 14:37	WI121025-3	10		9.3	mg/L	93	90	110			
L11460-05AS	AS	04/11/13 14:50	SO4TURB25	20	1220	1256	mg/L	180	90	110			M3
L11460-03DUP	DUP	04/11/13 14:59			1360	1365	mg/L				0.4	20	
WG342060													
WG342060ICB	ICB	04/15/13 14:20				U	mg/L		-3	3			
WG342060ICV	ICV	04/15/13 14:20	WI130401-1	20		19.3	mg/L	96.5	90	110			
L11460-01DUP	DUP	04/15/13 14:49			1630	1667	mg/L				2.2	20	
L11460-02AS	AS	04/15/13 14:49	SO4TURB5	100	1740	1794	mg/L	54	90	110			M3
WG342060LFB	LFB	04/15/13 14:58	WI121025-3	10		9.7	mg/L	97	90	110			

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342446													
WG342446ICV	ICV	04/22/13 18:27	WI130315-7	50		49.27	mg/L	98.5	90	110			
WG342446ICB	ICB	04/22/13 18:45				U	mg/L		-1.5	1.5			
WG342446LFB1	LFB	04/22/13 19:02	WI121018-8	30		31.09	mg/L	103.6	90	110			
WG342446LFB2	LFB	04/23/13 3:30	WI121018-8	30		31.51	mg/L	105	90	110			
L11423-03DUP	DUP	04/23/13 8:10			U	U	mg/L				0	20	RA
L11423-04AS	AS	04/23/13 9:20	WI121018-8	30	U	29.88	mg/L	99.6	90	110			

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.05467	mg/L	109.3	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0003	0.0003			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.05005		.04723	mg/L	94.4	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.05005	U	.05074	mg/L	101.4	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.05005	U	.05021	mg/L	100.3	70	130	1.05	20	
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05338	mg/L	106.8	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.04783	mg/L	95.6	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.04849	mg/L	96.9	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.04944	mg/L	98.8	70	130	1.94	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341855													
WG341855ICV1	ICV	04/11/13 14:36	MS130402-2	.05		.05339	mg/L	106.8	90	110			
WG341855ICB1	ICB	04/11/13 14:39				U	mg/L		-0.0003	0.0003			
WG341855LFB	LFB	04/11/13 14:42	MS130329-1	.05		.0472	mg/L	94.4	85	115			
L11460-05AS	AS	04/11/13 15:39	MS130329-1	.05	.0089	.0607	mg/L	103.6	70	130			
L11460-05ASD	ASD	04/11/13 15:42	MS130329-1	.05	.0089	.06078	mg/L	103.8	70	130	0.13	20	

WG341927

WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05268	mg/L	105.4	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05		.0486	mg/L	97.2	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05	.0001	.05495	mg/L	109.7	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05	.0001	.05629	mg/L	112.4	70	130	2.41	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.966	mg/L	98.3	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.514	mg/L	102.8	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	1.45	1.916	mg/L	93.2	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	1.45	1.894	mg/L	88.8	85	115	1.15	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L11462

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11462-01	WG341906	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).
	WG341914	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.
L11462-02	WG342446	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).
L11462-03	WG341763	Calcium, dissolved	M200.7 ICP	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.
	WG341872	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341906	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).
	WG341914	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.
L11462-04	WG341906	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).
	WG341914	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.
L11462-05	WG342446	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).
L11462-06	WG341763	Calcium, dissolved	M200.7 ICP	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.
	WG341864	Conductivity @25C	SM2510B	ZW	Method deviation. The sample was centrifuged prior to analysis due to high solid content.
	WG341872	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341906	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).
	WG341864	pH	SM4500H+ B	ZW	Method deviation. The sample was centrifuged prior to analysis due to high solid content.
	WG342060	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.
	WG341864	Total Alkalinity	SM2320B - Titration	ZW	Method deviation. The sample was centrifuged prior to analysis due to high solid content.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11462**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11462
Date Received: 04/05/2013 10:04
Received By: ksj
Date Printed: 4/5/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA17372	2.5	12	Yes

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



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

Telephone: 520-393-2714

Telephone: 520-622-3222**Telephone:**

NO

ANALYSIS REQUESTED (attach list or use question number)

45-13 (10:04)

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

April 30, 2013

Cc: Ben Daigneau

Project ID: ZS000003Q8
ACZ Project ID: L11464— **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 05, 2013. This project was assigned to ACZ's project number, **L11464**. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L11464**. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-13B

ACZ Sample ID: **L11464-01**

Date Sampled: 04/03/13 10:09

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1050		*	mg/L	50	300	04/15/13 16:18	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-13A

ACZ Sample ID: **L11464-02**

Date Sampled: 04/03/13 12:23

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1760		*	mg/L	50	300	04/15/13 16:18	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-13C

ACZ Sample ID: **L11464-03**

Date Sampled: 04/03/13 12:39

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	45		*	mg/L	5	30	04/15/13 14:49	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-25B

ACZ Sample ID: **L11464-04**

Date Sampled: 04/03/13 14:30

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	50	300	04/15/13 16:18	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-25A

ACZ Sample ID: **L11464-05**

Date Sampled: 04/03/13 15:09

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	9		*	mg/L	1	5	04/15/13 14:58	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-25C

ACZ Sample ID: **L11464-06**

Date Sampled: 04/03/13 15:47

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1270		*	mg/L	50	300	04/15/13 15:12	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-26C

ACZ Sample ID: **L11464-07**

Date Sampled: 04/04/13 11:26

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	880		*	mg/L	50	300	04/15/13 15:12	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-26B

ACZ Sample ID: **L11464-08**

Date Sampled: 04/04/13 11:27

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1690		*	mg/L	50	300	04/15/13 16:18	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-26A

ACZ Sample ID: **L11464-09**

Date Sampled: 04/04/13 11:44

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	8		*	mg/L	1	5	04/15/13 14:59	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: DUP20130403A

ACZ Sample ID: **L11464-10**

Date Sampled: 04/03/13 00:00

Date Received: 04/05/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1290		*	mg/L	50	300	04/15/13 15:12	tcd

Arizona license number: AZ0102


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.02		.02078	mg/L	103.9	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0012	0.0012			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.01		.00995	mg/L	99.5	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.01	U	.01044	mg/L	104.4	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.01	U	.01046	mg/L	104.6	70	130	0.19	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.02	U	.02338	mg/L	116.9	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.02	U	.02224	mg/L	111.2	70	130	5	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05227	mg/L	104.5	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0006	0.0006			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.0479	mg/L	95.7	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	.0032	.05047	mg/L	94.4	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	.0032	.05176	mg/L	97	70	130	2.52	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1001	.0021	.11418	mg/L	112	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1001	.0021	.117	mg/L	114.8	70	130	2.44	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.04487	mg/L	89.7	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.00015	0.00015			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.0501		.04255	mg/L	84.9	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.0501	U	.04542	mg/L	90.7	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.0501	U	.04717	mg/L	94.2	70	130	3.78	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1002	U	.10928	mg/L	109.1	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1002	U	.10604	mg/L	105.8	70	130	3.01	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05044	mg/L	100.9	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.0501		.04654	mg/L	92.9	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.0501	U	.04527	mg/L	90.4	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.0501	U	.04603	mg/L	91.9	70	130	1.66	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1002	U	.11418	mg/L	114	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1002	U	.10708	mg/L	106.9	70	130	6.42	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.963	mg/L	98.2	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.514	mg/L	102.8	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	U	.498	mg/L	99.6	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	U	.497	mg/L	99.4	85	115	0.2	20	
L11480-01AS	AS	04/09/13 21:38	II130326-2	.5	U	.524	mg/L	104.8	85	115			
L11480-01ASD	ASD	04/09/13 21:41	II130326-2	.5	U	.51	mg/L	102	85	115	2.71	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2.002		2.008	mg/L	100.3	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.495	mg/L	99	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	U	.491	mg/L	98.2	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	U	.479	mg/L	95.8	85	115	2.47	20	
L11480-01AS	AS	04/09/13 21:38	II130326-2	.5	U	.512	mg/L	102.4	85	115			
L11480-01ASD	ASD	04/09/13 21:41	II130326-2	.5	U	.515	mg/L	103	85	115	0.58	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.95	mg/L	97.5	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.03	0.03			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.497	mg/L	99.4	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	U	.52	mg/L	104	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	U	.517	mg/L	103.4	85	115	0.58	20	
L11480-01AS	AS	04/09/13 21:38	II130326-2	.5	U	.516	mg/L	103.2	85	115			
L11480-01ASD	ASD	04/09/13 21:41	II130326-2	.5	U	.516	mg/L	103.2	85	115	0	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341906													
WG341906ICV	ICV	04/11/13 12:41	WC130410-	2.002		1.96	mg/L	97.9	95	105			
WG341906ICB	ICB	04/11/13 12:49				U	mg/L		-0.3	0.3			
WG341906LFB1	LFB	04/11/13 13:03	WC130313-	5.005		4.75	mg/L	94.9	90	110			
L11462-04AS	AS	04/11/13 14:11	WC130313-	5.005	.2	4.69	mg/L	89.7	90	110			
L11462-04DUP	DUP	04/11/13 14:18			.2	.22	mg/L				9.5	20	RA
WG341906LFB2	LFB	04/11/13 15:18	WC130313-	5.005		4.65	mg/L	92.9	90	110			
L11464-09AS	AS	04/11/13 15:33	WC130313-	5.005	.6	5.32	mg/L	94.3	90	110			
L11464-09DUP	DUP	04/11/13 15:40			.6	.54	mg/L				10.5	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.04908	mg/L	98.2	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.04494	mg/L	89.8	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.04767	mg/L	95.2	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.04854	mg/L	97	70	130	1.81	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1001	.0006	.11464	mg/L	113.9	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1001	.0006	.10786	mg/L	107.2	70	130	6.09	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	100		100.8	mg/L	100.8	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.6	0.6			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	49.99941		52.42	mg/L	104.8	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	49.99941	117	168.2	mg/L	102.4	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	49.99941	117	167.1	mg/L	100.2	85	115	0.66	20	
L11480-01AS	AS	04/09/13 21:38	II130326-2	49.99941	6.4	58.69	mg/L	104.6	85	115			
L11480-01ASD	ASD	04/09/13 21:41	II130326-2	49.99941	6.4	58.5	mg/L	104.2	85	115	0.32	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341763													
WG341763ICV	ICV	04/09/13 19:58	II130114-3	2		1.974	mg/L	98.7	95	105			
WG341763ICB	ICB	04/09/13 20:04				U	mg/L		-0.06	0.06			
WG341763LFB	LFB	04/09/13 20:17	II130326-2	.5		.497	mg/L	99.4	85	115			
L11462-03AS	AS	04/09/13 20:26	II130326-2	.5	.02	.549	mg/L	105.8	85	115			
L11462-03ASD	ASD	04/09/13 20:29	II130326-2	.5	.02	.533	mg/L	102.6	85	115	2.96	20	
L11480-01AS	AS	04/09/13 21:38	II130326-2	.5	U	.511	mg/L	102.2	85	115			
L11480-01ASD	ASD	04/09/13 21:41	II130326-2	.5	U	.493	mg/L	98.6	85	115	3.59	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.04999	mg/L	100	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0018	0.0018			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.047	mg/L	93.9	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.03857	mg/L	77.1	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.03957	mg/L	79.1	70	130	2.56	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1001	U	.092	mg/L	91.9	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1001	U	.092	mg/L	91.9	70	130	0	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342011													
WG342011ICV	ICV	04/13/13 14:37	WI130411-3	2.416		2.3	mg/L	95.2	90	110			
WG342011ICB	ICB	04/13/13 14:38				U	mg/L		-0.06	0.06			
WG342012													
WG342012LFB1	LFB	04/13/13 15:10	WI130215-3	2		2.053	mg/L	102.7	90	110			
L11464-01AS	AS	04/13/13 15:12	WI130215-3	2	1.17	3.106	mg/L	96.8	90	110			
L11464-02DUP	DUP	04/13/13 15:14			.8	.797	mg/L				0.4	20	
WG342012LFB2	LFB	04/13/13 15:44	WI130215-3	2		2.007	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
WG341648													
WG341648PBW	PBW	04/05/13 17:22				U	mg/L		-20	20			
WG341648LCSW	LCSW	04/05/13 17:22	PCN40254	260		248	mg/L	95.4	80	120			
L11464-10DUP	DUP	04/05/13 17:41			2180	2180	mg/L				0	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05209	mg/L	104.2	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.04455	mg/L	89	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.04761	mg/L	95.1	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.05186	mg/L	103.6	70	130	8.55	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1001	.002	.11126	mg/L	109.2	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1001	.002	.12004	mg/L	117.9	70	130	7.59	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342060													
WG342060ICB	ICB	04/15/13 14:20				U	mg/L		-3	3			
WG342060ICV	ICV	04/15/13 14:20	WI130401-1	20		19.3	mg/L	96.5	90	110			
L11460-01DUP	DUP	04/15/13 14:49			1630	1667	mg/L				2.2	20	
L11460-02AS	AS	04/15/13 14:49	SO4TURB5	100	1740	1794	mg/L	54	90	110			M3
WG342060LFB	LFB	04/15/13 14:58	WI121025-3	10		9.7	mg/L	97	90	110			
L11464-09AS	AS	04/15/13 14:59	WI121025-3	10	8	19.7	mg/L	117	90	110			M1
L11464-08DUP	DUP	04/15/13 16:18			1690	1675	mg/L				0.9	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341927													
WG341927ICV	ICV	04/11/13 22:23	MS130402-2	.05		.05338	mg/L	106.8	90	110			
WG341927ICB	ICB	04/11/13 22:26				U	mg/L		-0.0003	0.0003			
WG341927LFB	LFB	04/11/13 22:30	MS130329-1	.05005		.04783	mg/L	95.6	85	115			
L11372-02AS	AS	04/11/13 22:39	MS130329-1	.05005	U	.04849	mg/L	96.9	70	130			
L11372-02ASD	ASD	04/11/13 22:43	MS130329-1	.05005	U	.04944	mg/L	98.8	70	130	1.94	20	
L11464-06AS	AS	04/11/13 23:25	MS130329-1	.1001	U	.11602	mg/L	115.9	70	130			
L11464-06ASD	ASD	04/11/13 23:29	MS130329-1	.1001	U	.11604	mg/L	115.9	70	130	0.02	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L11464

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11464-01	WG341906	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).
	WG342060	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.
L11464-02	WG341906	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).
	WG342060	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.
L11464-03	WG341906	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).
	WG342060	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.
L11464-04	WG341906	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).
	WG342060	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.
L11464-05	WG341906	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).
	WG342060	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.
L11464-06	WG341906	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).
	WG342060	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.
L11464-07	WG341906	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).
	WG342060	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.
L11464-08	WG341906	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).
	WG342060	Sulfate	D516-02 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L11464-09	WG341906	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).
	WG342060	Sulfate	D516-02 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11464-10	WG341906	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).
	WG342060	Sulfate	D516-02 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11464**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11464
Date Received: 04/05/2013 10:04
Received By: ksj
Date Printed: 4/5/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

The first sample on the COC was removed from this project as it was a duplicate of the sample on L11463.

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA17372	2.5	12	Yes

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



Laboratories, Inc.

L11464

CHAIN OF CUSTODY

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

Report to:

Name: Jon Andersoni

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

Give 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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE TIME

Matrix

of Containers

SO4 by EPA 300 or EPA 375

Quarterly

MH-30

4/2/2013 : 1056

GW

1

X

4.5.13

see

L11463

MH-13B

4/3/2013 : 1009

GW

3

X

MH-13A

4/3/2013 : 1223

GW

3

X

MH-13C

4/3/2013 : 1239

GW

3

X

MH-25B

4/3/2013 : 1430

GW

3

X

MH-25A

4/3/2013 : 1509

GW

3

X

MH-25C

4/3/2013 : 1547

GW

3

X

MH-26C

4/4/2013 : 1126

GW

3

X

MH-26B

4/4/2013 : 1127

GW

3

X

MH-26A

4/4/2013 : 1144

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

UPS Tracking #1Z 867 7E4 23 1001 093 3

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

RELEASED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

Alexis Alvarez

4/4/2013 : 1430

ECG

4.5.13 10:04

L11464 Chain of Custody

1/2

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

Representative

Name: Jon Andersoni		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

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

PROJECT INFORMATION

ANA, YSFS REQUESTED (attach list or use quote number)

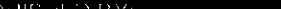
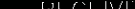
[illegible]

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 1001 093 3

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
Alexis Alvarez 	4/4/2013 : 1430	LEX 	4.5.13 10:09

May 02, 2013

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: ZS000003Q8

ACZ Project ID: L11560

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 12, 2013. This project has been assigned to ACZ's project number, L11560. 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 L11560. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 01, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-1A

ACZ Sample ID: **L11560-01**

Date Sampled: 04/08/13 10:02

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	17.92			mg/L	0.5	2.5	04/25/13 10:40	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-1B

ACZ Sample ID: **L11560-02**

Date Sampled: 04/08/13 12:00

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	873.7			mg/L	25	125	04/25/13 11:15	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-1C

ACZ Sample ID: **L11560-03**

Date Sampled: 04/08/13 12:58

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	416.3			mg/L	5	25	04/25/13 11:50	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-2

ACZ Sample ID: **L11560-04**

Date Sampled: 04/08/13 14:56

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	455.7		*	mg/L	5	25	05/01/13 17:06	lhb

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-3B

ACZ Sample ID: **L11560-05**

Date Sampled: 04/09/13 12:40

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	180.87			mg/L	2.5	12.5	04/25/13 12:25	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-3C

ACZ Sample ID: **L11560-06**

Date Sampled: 04/09/13 12:46

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	89.78			mg/L	2.5	12.5	04/25/13 13:18	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-6A

ACZ Sample ID: **L11560-07**

Date Sampled: 04/09/13 14:19

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	32.44			mg/L	0.5	2.5	04/25/13 13:35	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-6B

ACZ Sample ID: **L11560-08**

Date Sampled: 04/09/13 15:41

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	54.72			mg/L	0.5	2.5	04/25/13 13:53	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: DUP20130409A

ACZ Sample ID: **L11560-09**

Date Sampled: 04/09/13 00:00

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	32.94			mg/L	0.5	2.5	04/25/13 14:10	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4B

ACZ Sample ID: **L11560-10**

Date Sampled: 04/10/13 11:46

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.31			mg/L	0.5	2.5	04/25/13 14:45	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4A

ACZ Sample ID: **L11560-11**

Date Sampled: 04/10/13 12:47

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.69			mg/L	0.5	2.5	04/25/13 15:20	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4C

ACZ Sample ID: **L11560-12**

Date Sampled: 04/10/13 13:03

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	93.24			mg/L	0.5	2.5	04/25/13 15:38	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2009-1

ACZ Sample ID: **L11560-13**

Date Sampled: 04/10/13 15:29

Date Received: 04/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	105.80			mg/L	1	5	04/25/13 16:30	tcd

Arizona license number: AZ0102


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11560**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342446													
WG342446ICV	ICV	04/22/13 18:27	WI130315-7	50		49.27	mg/L	98.5	90	110			
WG342446ICB	ICB	04/22/13 18:45				U	mg/L		-1.5	1.5			
WG342627													
WG342627LFB1	LFB	04/25/13 9:47	WI121018-8	30		31.52	mg/L	105.1	90	110			
L11560-01DUP	DUP	04/25/13 10:57			17.92	17.83	mg/L				0.5	20	
L11560-02AS	AS	04/25/13 11:32	WI121018-8	1500	873.7	2519.9	mg/L	109.7	90	110			
L11560-09DUP	DUP	04/25/13 14:28			32.94	32.88	mg/L				0.2	20	
L11560-10AS	AS	04/25/13 15:03	WI121018-8	30	33.31	63.01	mg/L	99	90	110			
WG342627LFB2	LFB	04/25/13 18:15	WI121018-8	30		31.23	mg/L	104.1	90	110			
WG342832													
L11397-01DUP	DUP	04/29/13 17:34			301.5	313.7	mg/L				4	20	
WG342832LFB1	LFB	05/01/13 12:26	WI130501-1	30		30.37	mg/L	101.2	90	110			
WG342832LFB2	LFB	05/01/13 12:43	WI130501-1	30		30.51	mg/L	101.7	90	110			
L11560-04AS	AS	05/01/13 17:23	WI130501-1	300	455.7	861.2	mg/L	135.2	90	110			M1

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11560**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11560-04	WG342832	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11560**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11560
Date Received: 04/12/2013 09:20
Received By: ksj
Date Printed: 4/12/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3869	3.8	11	Yes

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

L11560

ACZ Laboratories, Inc.

CHAIN OF CUSTODY

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

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: 520-648-8844

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

ANALYSES REQUESTED (check box or type in number)

Quote #:	Project/PO #:	Reporting state for compliance testing:	Sampler's Name:	Are any samples NRC licensable material? Yes No	Matrix	# of Containers	SO4 by EPA 300 or EPA 375												
MO-2007-1A	4/8/2013 ; 1002	GW	1	X															
MO-2007-1B	4/8/2013 ; 1200	GW	1	X															
MO-2007-1C	4/8/2013 ; 1258	GW	1	X															
MO-2007-2	4/8/2013 ; 1456	GW	1	X															
MO-2007-3B	4/9/2013 ; 1240	GW	1	X															
MO-2007-3C	4/9/2013 ; 1246	GW	1	X															
MO-2007-6A	4/9/2013 ; 1419	GW	1	X															
MO-2007-6B	4/9/2013 ; 1541	GW	1	X															
DUP20130409A	4/9/2013	GW	1	X															
MO-2007-4B	4/10/2013 ; 1146	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 1001 090 6

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
Jeff Joy	4/11/13 ; 1500		

L11560 Chain of Custody

66560



Laboratories, Inc.

CHAIN OF CUSTODY

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

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

ANALYSES REQUESTED (attach list or use space below)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE/TIME

MATRIX

of Containers

SO4 by EPA 300 or EPA 375

MO-2007-4A

4/10/2013 ; 1247

GW

1

X

MO-2007-4C

4/10/2013 ; 1303

GW

1

X

MO-2009-1

4/10/2013 ; 1529

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

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

UPS Tracking # 1Z 867 7E4 23 1001 090 6

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

RELINQUISHED BY

DATE/TIME

RECEIVED BY:

DATE/TIME

Jeff Joy

4/11/2013 ; 1500

6/14/12-13 9:20

May 02, 2013

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: ZS000003Q8

ACZ Project ID: L11669

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 19, 2013. This project has been assigned to ACZ's project number, L11669. 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 L11669. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 01, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: M-10

ACZ Sample ID: **L11669-01**

Date Sampled: 04/17/13 13:08

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	170.32		*	mg/L	2.5	12.5	05/01/13 13:01	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: M-8

ACZ Sample ID: **L11669-02**

Date Sampled: 04/17/13 15:26

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	138.89		*	mg/L	1	5	05/01/13 13:18	lhb

Arizona license number: AZ0102


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11669**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342446													
WG342446ICV	ICV	04/22/13 18:27	WI130315-7	50		49.27	mg/L	98.5	90	110			
WG342446ICB	ICB	04/22/13 18:45				U	mg/L		-1.5	1.5			
WG342832													
L11397-01DUP	DUP	04/29/13 17:34			301.5	313.7	mg/L				4	20	
WG342832LFB1	LFB	05/01/13 12:26	WI130501-1	30		30.37	mg/L	101.2	90	110			
WG342832LFB2	LFB	05/01/13 12:43	WI130501-1	30		30.51	mg/L	101.7	90	110			
L11560-04AS	AS	05/01/13 17:23	WI130501-1	300	455.7	861.2	mg/L	135.2	90	110			M1

FMI Gold & Copper - SierritaACZ Project ID: **L11669**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11669-01	WG342832	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L11669-02	WG342832	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11669**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11669
Date Received: 04/19/2013 09:54
Received By: ksj
Date Printed: 4/19/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3805	2.1	11	Yes

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



CHAIN OF CUSTODY:

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

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

Page: 00: 10:

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

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

PROJECT INFORMATION

ANA, YSE IS REQUESTED (attach list of test specific numbers)

[illegible]


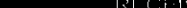
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)
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REMARKS

UPS Tracking # 1Z 867 7E4 23 1001 092 4

2 COOLERS TOTAL

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
Jeff Joy 	4/18/13 : 1530	 4/19/13	0954

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

June 5, 2013

Cc: Ben Daigneau

Project ID: ZS000003Q8
ACZ Project ID: L11670– **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 19, 2013. This project was assigned to ACZ's project number, **L11670**. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L11670**. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-1

ACZ Sample ID: **L11670-01**

Date Sampled: 04/15/13 08:50

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	50	980			mg/L	50	300	04/25/13 14:44	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-2A

ACZ Sample ID: **L11670-02**

Date Sampled: 04/15/13 09:12

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	5	123			mg/L	5	30	04/25/13 14:43	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-25

ACZ Sample ID: **L11670-03**

Date Sampled: 04/15/13 09:22

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	20	390			mg/L	20	100	04/25/13 14:53	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-9

ACZ Sample ID: **L11670-04**

Date Sampled: 04/15/13 09:43

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1730			mg/L	80	400	04/25/13 14:55	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-26

ACZ Sample ID: **L11670-05**

Date Sampled: 04/15/13 09:52

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1700			mg/L	100	500	04/25/13 14:45	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-4

ACZ Sample ID: **L11670-06**

Date Sampled: 04/15/13 10:00

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1800			mg/L	100	500	04/25/13 14:45	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-24

ACZ Sample ID: **L11670-07**

Date Sampled: 04/15/13 10:10

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1900			mg/L	100	500	04/25/13 14:45	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-5A

ACZ Sample ID: **L11670-08**

Date Sampled: 04/15/13 10:17

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1760			mg/L	80	400	04/25/13 14:55	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-23

ACZ Sample ID: **L11670-09**

Date Sampled: 04/15/13 10:26

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1800			mg/L	80	400	04/25/13 14:55	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-10

ACZ Sample ID: **L11670-10**

Date Sampled: 04/15/13 10:44

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1740			mg/L	80	400	04/25/13 14:55	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-28

ACZ Sample ID: **L11670-11**

Date Sampled: 04/15/13 10:52

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1720		*	mg/L	80	400	04/25/13 14:57	lhb

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-22

ACZ Sample ID: **L11670-12**

Date Sampled: 04/15/13 11:00

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1810		*	mg/L	80	400	04/25/13 14:57	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-11

ACZ Sample ID: **L11670-13**

Date Sampled: 04/15/13 12:47

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1730		*	mg/L	80	400	04/25/13 14:59	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-6A

ACZ Sample ID: **L11670-14**

Date Sampled: 04/15/13 12:55

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1840		*	mg/L	80	400	04/25/13 14:59	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-13

ACZ Sample ID: **L11670-15**

Date Sampled: 04/15/13 13:09

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1760		*	mg/L	80	400	04/25/13 14:59	lhb

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-14

ACZ Sample ID: **L11670-16**

Date Sampled: 04/15/13 13:20

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1870		*	mg/L	80	400	04/25/13 15:00	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-21

ACZ Sample ID: **L11670-17**

Date Sampled: 04/15/13 13:50

Date Received: 04/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1690		*	mg/L	80	400	04/25/13 15:00	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8
Sample ID: DUP20130415A

ACZ Sample ID: **L11670-18**
Date Sampled: 04/15/13 00:00
Date Received: 04/19/13
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	75	1740		*	mg/L	80	400	04/25/13 15:00	lhb

Arizona license number: **AZ0102**

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
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- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
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- (5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.02		.02044	mg/L	102.2	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0012	0.0012			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.01		.01012	mg/L	101.2	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.01	U	.00952	mg/L	95.2	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.01	U	.00971	mg/L	97.1	70	130	1.98	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.02	U	.0244	mg/L	122	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.02	U	.02302	mg/L	115.1	70	130	5.82	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.05125	mg/L	102.5	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0006	0.0006			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.05005		.0484	mg/L	96.7	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.05005	.0058	.06062	mg/L	109.5	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.05005	.0058	.05921	mg/L	106.7	70	130	2.35	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1001	.0011	.1188	mg/L	117.6	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1001	.0011	.11642	mg/L	115.2	70	130	2.02	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.04633	mg/L	92.7	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.00015	0.00015			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.0501		.04647	mg/L	92.8	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.0501	U	.05088	mg/L	101.6	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.0501	U	.05089	mg/L	101.6	70	130	0.02	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1002	U	.11482	mg/L	114.6	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1002	U	.10992	mg/L	109.7	70	130	4.36	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.04968	mg/L	99.4	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0003	0.0003			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.0501		.04835	mg/L	96.5	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.0501	U	.04989	mg/L	99.6	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.0501	U	.04901	mg/L	97.8	70	130	1.78	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1002	U	.10506	mg/L	104.9	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1002	U	.0998	mg/L	99.6	70	130	5.14	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342517													
WG342517ICV	ICV	04/23/13 23:57	II130114-3	2		1.996	mg/L	99.8	95	105			
WG342517ICB	ICB	04/24/13 0:03				U	mg/L		-0.03	0.03			
WG342517LFB	LFB	04/24/13 0:15	II130326-2	.5		.531	mg/L	106.2	85	115			
L11667-01AS	AS	04/24/13 0:25	II130326-2	.5	U	.497	mg/L	99.4	85	115			
L11667-01ASD	ASD	04/24/13 0:28	II130326-2	.5	U	.528	mg/L	105.6	85	115	6.05	20	
L11670-10AS	AS	04/24/13 1:08	II130326-2	1	U	1.039	mg/L	103.9	85	115			
L11670-10ASD	ASD	04/24/13 1:12	II130326-2	1	U	.969	mg/L	96.9	85	115	6.97	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342517													
WG342517ICV	ICV	04/23/13 23:57	II130114-3	2.002		2.041	mg/L	101.9	95	105			
WG342517ICB	ICB	04/24/13 0:03				U	mg/L		-0.03	0.03			
WG342517LFB	LFB	04/24/13 0:15	II130326-2	.5		.525	mg/L	105	85	115			
L11667-01AS	AS	04/24/13 0:25	II130326-2	.5	U	.486	mg/L	97.2	85	115			
L11667-01ASD	ASD	04/24/13 0:28	II130326-2	.5	U	.524	mg/L	104.8	85	115	7.52	20	
L11670-10AS	AS	04/24/13 1:08	II130326-2	1	U	1.055	mg/L	105.5	85	115			
L11670-10ASD	ASD	04/24/13 1:12	II130326-2	1	U	.968	mg/L	96.8	85	115	8.6	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342517													
WG342517ICV	ICV	04/23/13 23:57	II130114-3	2		2.011	mg/L	100.6	95	105			
WG342517ICB	ICB	04/24/13 0:03				U	mg/L		-0.03	0.03			
WG342517LFB	LFB	04/24/13 0:15	II130326-2	.5		.525	mg/L	105	85	115			
L11667-01AS	AS	04/24/13 0:25	II130326-2	.5	.02	.511	mg/L	98.2	85	115			
L11667-01ASD	ASD	04/24/13 0:28	II130326-2	.5	.02	.536	mg/L	103.2	85	115	4.78	20	
L11670-10AS	AS	04/24/13 1:08	II130326-2	1	U	1.063	mg/L	106.3	85	115			
L11670-10ASD	ASD	04/24/13 1:12	II130326-2	1	U	1.002	mg/L	100.2	85	115	5.91	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342888													
WG342888ICV	ICV	04/30/13 10:23	WC130423-	2.002		1.96	mg/L	97.9	95	105			
WG342888ICB	ICB	04/30/13 10:31				U	mg/L		-0.3	0.3			
WG342888LFB	LFB	04/30/13 10:45	WC130313-	5.005		4.57	mg/L	91.3	90	110			
L11667-01AS	AS	04/30/13 10:51	WC130313-	5.005	.5	4.93	mg/L	88.5	90	110			M2
L11667-01DUP	DUP	04/30/13 10:59			.5	.45	mg/L				10.5	20	RA
L11670-10AS	AS	04/30/13 11:50	WC130313-	5.005	.2	4.63	mg/L	88.5	90	110			M2
L11670-10DUP	DUP	04/30/13 11:53			.2	.23	mg/L				14	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.05078	mg/L	101.6	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0003	0.0003			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.05005		.04858	mg/L	97.1	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.05005	.0008	.05022	mg/L	98.7	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.05005	.0008	.05024	mg/L	98.8	70	130	0.04	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1001	.0029	.11352	mg/L	110.5	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1001	.0029	.10934	mg/L	106.3	70	130	3.75	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342517													
WG342517ICV	ICV	04/23/13 23:57	II130114-3	100		102.05	mg/L	102.1	95	105			
WG342517ICB	ICB	04/24/13 0:03				U	mg/L		-0.6	0.6			
WG342517LFB	LFB	04/24/13 0:15	II130326-2	49.99941		54.1	mg/L	108.2	85	115			
L11667-01AS	AS	04/24/13 0:25	II130326-2	49.99941	41.5	94.55	mg/L	106.1	85	115			
L11667-01ASD	ASD	04/24/13 0:28	II130326-2	49.99941	41.5	95.77	mg/L	108.5	85	115	1.28	20	
L11670-10AS	AS	04/24/13 1:08	II130326-2	99.99882	104	190.18	mg/L	86.2	85	115			
L11670-10ASD	ASD	04/24/13 1:12	II130326-2	99.99882	104	179.28	mg/L	75.3	85	115	5.9	20	MA

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342517													
WG342517ICV	ICV	04/23/13 23:57	II130114-3	2		2.037	mg/L	101.9	95	105			
WG342517ICB	ICB	04/24/13 0:03				U	mg/L		-0.06	0.06			
WG342517LFB	LFB	04/24/13 0:15	II130326-2	.5		.539	mg/L	107.8	85	115			
L11667-01AS	AS	04/24/13 0:25	II130326-2	.5	.02	.559	mg/L	107.8	85	115			
L11667-01ASD	ASD	04/24/13 0:28	II130326-2	.5	.02	.56	mg/L	108	85	115	0.18	20	
L11670-10AS	AS	04/24/13 1:08	II130326-2	1	.1	1.136	mg/L	103.6	85	115			
L11670-10ASD	ASD	04/24/13 1:12	II130326-2	1	.1	1.119	mg/L	101.9	85	115	1.51	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.04969	mg/L	99.4	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0018	0.0018			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.05005		.04806	mg/L	96	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.05005	U	.0477	mg/L	95.3	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.05005	U	.04644	mg/L	92.8	70	130	2.68	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1001	U	.102	mg/L	101.9	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1001	U	.1008	mg/L	100.7	70	130	1.18	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342802													
WG342802ICV	ICV	04/27/13 14:59	WI130411-3	2.416		2.575	mg/L	106.6	90	110			
WG342802ICB	ICB	04/27/13 15:00				U	mg/L		-0.06	0.06			
WG342805													
WG342805LFB1	LFB	04/27/13 18:32	WI130215-3	2		1.995	mg/L	99.8	90	110			
WG342805LFB2	LFB	04/27/13 19:06	WI130215-3	2		1.986	mg/L	99.3	90	110			
L11670-09AS	AS	04/27/13 19:09	WI130215-3	2	.85	2.963	mg/L	105.7	90	110			
L11670-10DUP	DUP	04/27/13 19:11			.73	.726	mg/L				0.5	20	
L11668-05AS	AS	04/27/13 19:31	WI130215-3	20	9.9	30.72	mg/L	104.1	90	110			
L11668-06DUP	DUP	04/27/13 19:34			18.4	18.57	mg/L				0.9	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342343													
WG342343PBW	PBW	04/19/13 3:40				U	mg/L		-20	20			
WG342343LCSW	LCSW	04/19/13 4:12	PCN42170	260		252	mg/L	96.9	80	120			
L11672-02DUP	DUP	04/19/13 15:59			2520	2628	mg/L				4.2	20	
WG342342													
WG342342PBW	PBW	04/19/13 15:20				U	mg/L		-20	20			
WG342342LCSW	LCSW	04/19/13 15:20	PCN42170	260		248	mg/L	95.4	80	120			
L11670-10DUP	DUP	04/19/13 15:30			3120	3104	mg/L				0.5	20	
L11684-08DUP	DUP	04/19/13 15:39			100	96	mg/L				4.1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.05163	mg/L	103.3	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0003	0.0003			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.05005		.04812	mg/L	96.1	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.05005	.0007	.05529	mg/L	109.1	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.05005	.0007	.05578	mg/L	110	70	130	0.88	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1001	.0013	.11142	mg/L	110	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1001	.0013	.10982	mg/L	108.4	70	130	1.45	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342700													
WG342700ICB	ICB	04/25/13 10:09				U	mg/L		-3	3			
WG342700ICV	ICV	04/25/13 10:09	WI130416-2	20		20.5	mg/L	102.5	90	110			
WG342700LFB	LFB	04/25/13 14:35	WI130416-3	9.99		10	mg/L	100.1	90	110			
L11670-02AS	AS	04/25/13 14:43	SO4TURB5	10	123	132.2	mg/L	92	90	110			
L11670-01DUP	DUP	04/25/13 14:44			980	1028	mg/L				4.8	20	
L11670-11DUP	DUP	04/25/13 14:57			1720	1772	mg/L				3	20	
L11670-12AS	AS	04/25/13 14:57	SO4TURB15	50.0000025	1810	1804	mg/L	-12	90	110			M3

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342796													
WG342796ICV	ICV	04/27/13 1:50	MS130416-2	.05		.05392	mg/L	107.8	90	110			
WG342796ICB	ICB	04/27/13 1:54				U	mg/L		-0.0003	0.0003			
WG342796LFB	LFB	04/27/13 1:57	MS130329-1	.05005		.05065	mg/L	101.2	85	115			
L11670-02AS	AS	04/27/13 2:13	MS130329-1	.05005	U	.05232	mg/L	104.5	70	130			
L11670-02ASD	ASD	04/27/13 2:16	MS130329-1	.05005	U	.05245	mg/L	104.8	70	130	0.25	20	
L11670-12AS	AS	04/27/13 2:58	MS130329-1	.1001	U	.1176	mg/L	117.5	70	130			
L11670-12ASD	ASD	04/27/13 3:01	MS130329-1	.1001	U	.11196	mg/L	111.8	70	130	4.91	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L11670

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11670-01	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-02	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-03	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-04	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-05	WG342796	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-06	WG342796	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-07	WG342796	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-08	WG342796	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11670-09	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-10	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L11670-11	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.
L11670-12	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: L11670

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11670-13	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.
L11670-14	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.
L11670-15	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11670-16	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.
L11670-17	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.
L11670-18	WG342796	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
			M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG342517	Magnesium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG342888	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG342700	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11670**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11670
Date Received: 04/19/2013 09:55
Received By: ksj
Date Printed: 4/19/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
3415	2	12	Yes

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



Laboratories, Inc.

L11670

CHAIN OF CUSTODY

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

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

Copies of Report to:

Name:

Company:

E-mail:

Telephone:

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

ANALYSTS REQUESTED (attach list of requested analyses)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION DATE TIME Matrix

Quote #:	Project/PO #:	Reporting state:	Sampler's Name:	Are any samples NRC licensable material?	SAMPLE IDENTIFICATION	DATE TIME	Matrix	# of Containers	Quarterly										
IW-1	4/15/13 : 0850	GW	3	X															
IW-2A	4/15/13 : 0912	GW	3	X															
IW-25	4/15/13 : 0922	GW	3	X															
IW-9	4/15/13 : 0943	GW	3	X															
IW-26	4/15/13 : 0952	GW	3	X															
IW-4	4/15/13 : 1000	GW	3	X															
IW-24	4/15/13 : 1010	GW	3	X															
IW-5A	4/15/13 : 1017	GW	3	X															
IW-23	4/15/13 : 1026	GW	3	X															
IW-10	4/15/13 : 1044	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

UPS Tracking # 1Z 867 7E4 23 1001 091 5

CHAIN OF CUSTODY CORRECTION

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

RELINQUISHED BY	DATE TIME	RECEIVED BY	DATE TIME
Jeff Joy	4/18/13 : 1530	AWC	4/19/13 0955

FRMAD050.01.15.09

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

L11670 Chain of Custody

1 of 2

ACZ Laboratories, Inc.

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

CHAIN OF CUSTODY

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:

Company:

E-mail:

Telephone:

Five 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

ANALYST: KATHLEEN STEVENSON (K. STEVENSON)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION DATE/TIME Matrix

IW-28	4/15/13 : 1052	GW
IW-22	4/15/13 : 1100	GW
IW-11	4/15/13 : 1247	GW
IW-6A	4/15/13 : 1255	GW
IW-13	4/15/13 : 1309	GW
IW-14	4/15/13 : 1320	GW
IW-21	4/15/13 : 1350	GW
DUP20130415A	4/15/13 : 0000	GW

of Containers

Quarterly

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 1001 091 5

CHAIN OF CUSTODY CORRECTION

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

RECEIVED BY	DATE/TIME	RECEIVED BY	DATE/TIME
Jeff Joy	4/18/13 : 1530	AKK	4/19/13 0955

May 07, 2013

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: ZS000003Q8

ACZ Project ID: L11775

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 26, 2013. This project has been assigned to ACZ's project number, L11775. 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 L11775. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 06, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: M-20

ACZ Sample ID: **L11775-01**

Date Sampled: 04/23/13 09:02

Date Received: 04/26/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1801.6			mg/L	25	125	05/03/13 2:53	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-11

ACZ Sample ID: **L11775-02**

Date Sampled: 04/23/13 11:16

Date Received: 04/26/13

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	05/03/13 12:45	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0030			mg/L	0.0004	0.002	05/03/13 12:45	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	05/03/13 12:45	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/03/13 12:45	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/01/13 21:52	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/01/13 21:52	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/01/13 21:52	jjc
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/03/13 12:45	pmc
Magnesium, dissolved	M200.7 ICP	102			mg/L	0.4	2	05/01/13 21:52	jjc
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.04	0.2	05/01/13 21:52	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	05/03/13 12:45	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0020			mg/L	0.0002	0.0005	05/03/13 12:45	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/03/13 12:45	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	05/03/13 20:15	ljr
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.42		*	mg/L	0.02	0.1	05/04/13 16:09	pjb
Residue, Filterable (TDS) @180C	SM2540C	2460			mg/L	10	20	04/26/13 14:34	mss3
Sulfate	D516-02 - Turbidimetric	1480		*	mg/L	50	300	05/06/13 15:36	jlf

Arizona license number: AZ0102


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11775**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.02		.02102	mg/L	105.1	90	110			
WG343123ICB	ICB	05/03/13 11:12				.0005	mg/L		-0.0012	0.0012			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.01		.00995	mg/L	99.5	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.01	U	.0094	mg/L	94	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.01	U	.00977	mg/L	97.7	70	130	3.86	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.05241	mg/L	104.8	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.0006	0.0006			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.05005		.04763	mg/L	95.2	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.05005	.0004	.0531	mg/L	105.3	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.05005	.0004	.05298	mg/L	105.1	70	130	0.23	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.0474	mg/L	94.8	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.00015	0.00015			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.0501		.04679	mg/L	93.4	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.0501	.00007	.04915	mg/L	98	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.0501	.00007	.04929	mg/L	98.2	70	130	0.28	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.05139	mg/L	102.8	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.0003	0.0003			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.0501		.04898	mg/L	97.8	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.0501	U	.04966	mg/L	99.1	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.0501	U	.04957	mg/L	98.9	70	130	0.18	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342989													
WG342989ICV	ICV	05/01/13 20:38	II130114-3	2		1.996	mg/L	99.8	95	105			
WG342989ICB	ICB	05/01/13 20:44				U	mg/L		-0.03	0.03			
WG342989LFB	LFB	05/01/13 20:56	II130426-4	.5		.51	mg/L	102	85	115			
L11777-08AS	AS	05/01/13 22:14	II130426-4	.5	U	.508	mg/L	101.6	85	115			
L11777-08ASD	ASD	05/01/13 22:17	II130426-4	.5	U	.507	mg/L	101.4	85	115	0.2	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11775**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342989													
WG342989ICV	ICV	05/01/13 20:38	II130114-3	2.002		2.03	mg/L	101.4	95	105			
WG342989ICB	ICB	05/01/13 20:44				U	mg/L		-0.03	0.03			
WG342989LFB	LFB	05/01/13 20:56	II130426-4	.5		.511	mg/L	102.2	85	115			
L11777-08AS	AS	05/01/13 22:14	II130426-4	.5	U	.511	mg/L	102.2	85	115			
L11777-08ASD	ASD	05/01/13 22:17	II130426-4	.5	U	.515	mg/L	103	85	115	0.78	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342989													
WG342989ICV	ICV	05/01/13 20:38	II130114-3	2		1.996	mg/L	99.8	95	105			
WG342989ICB	ICB	05/01/13 20:44				U	mg/L		-0.03	0.03			
WG342989LFB	LFB	05/01/13 20:56	II130426-4	.5		.517	mg/L	103.4	85	115			
L11777-08AS	AS	05/01/13 22:14	II130426-4	.5	U	.519	mg/L	103.8	85	115			
L11777-08ASD	ASD	05/01/13 22:17	II130426-4	.5	U	.52	mg/L	104	85	115	0.19	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343165													
WG343165ICV	ICV	05/03/13 16:51	WC130430-	2.002		2.04	mg/L	101.9	95	105			
WG343165ICB	ICB	05/03/13 16:59				U	mg/L		-0.3	0.3			
WG343165LFB1	LFB	05/03/13 17:13	WC130313-	5.005		4.87	mg/L	97.3	90	110			
L11693-03AS	AS	05/03/13 18:56	WC130313-	4004	U	3775	mg/L	94.3	90	110			
L11693-03DUP	DUP	05/03/13 19:02			U	U	mg/L				0	20	RA
WG343165LFB2	LFB	05/03/13 20:24	WC130313-	5.005		4.76	mg/L	95.1	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.05221	mg/L	104.4	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.0003	0.0003			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.05005		.04951	mg/L	98.9	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.05005	U	.04939	mg/L	98.7	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.05005	U	.04974	mg/L	99.4	70	130	0.71	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342989													
WG342989ICV	ICV	05/01/13 20:38	II130114-3	100		101.03	mg/L	101	95	105			
WG342989ICB	ICB	05/01/13 20:44				U	mg/L		-0.6	0.6			
WG342989LFB	LFB	05/01/13 20:56	II130426-4	49.99941		53.6	mg/L	107.2	85	115			
L11777-08AS	AS	05/01/13 22:14	II130426-4	49.99941	2.5	56.56	mg/L	108.1	85	115			
L11777-08ASD	ASD	05/01/13 22:17	II130426-4	49.99941	2.5	56.47	mg/L	107.9	85	115	0.16	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11775**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG342989													
WG342989ICV	ICV	05/01/13 20:38	II130114-3	2		2.03	mg/L	101.5	95	105			
WG342989ICB	ICB	05/01/13 20:44				U	mg/L		-0.06	0.06			
WG342989LFB	LFB	05/01/13 20:56	II130426-4	.5		.531	mg/L	106.2	85	115			
L11777-08AS	AS	05/01/13 22:14	II130426-4	.5	U	.534	mg/L	106.8	85	115			
L11777-08ASD	ASD	05/01/13 22:17	II130426-4	.5	U	.529	mg/L	105.8	85	115	0.94	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.05046	mg/L	100.9	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.0018	0.0018			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.05005		.04849	mg/L	96.9	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.05005	U	.04798	mg/L	95.9	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.05005	U	.04854	mg/L	97	70	130	1.16	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
WG343179													
WG343179ICV	ICV	05/04/13 14:13	WI130411-3	2.416		2.577	mg/L	106.7	90	110			
WG343179ICB	ICB	05/04/13 14:14				U	mg/L		-0.06	0.06			
WG343182													
WG343182LFB	LFB	05/04/13 15:49	WI130215-3	2		2.012	mg/L	100.6	90	110			
L11774-03AS	AS	05/04/13 16:08	WI130215-3	2	U	2.254	mg/L	112.7	90	110			M1
L11775-02DUP	DUP	05/04/13 16:10			1.42	1.43	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
WG342774													
WG342774PBW	PBW	04/26/13 14:15				U	mg/L		-20	20			
WG342774LCSW	LCSW	04/26/13 14:16	PCN42172	260		278	mg/L	106.9	80	120			
L11779-06DUP	DUP	04/26/13 14:44			780	778	mg/L				0.3	10	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.05277	mg/L	105.5	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.0003	0.0003			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.05005		.04942	mg/L	98.7	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.05005	.0005	.05536	mg/L	109.6	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.05005	.0005	.05612	mg/L	111.1	70	130	1.36	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11775**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343220													
WG343220ICB	ICB	05/06/13 12:48				U	mg/L		-3	3			
WG343220ICV	ICV	05/06/13 12:49	WI130502-2	20		20.4	mg/L	102	90	110			
WG343220LFB	LFB	05/06/13 14:36	WI130416-3	9.99		10.3	mg/L	103.1	90	110			
L11740-05DUP	DUP	05/06/13 15:34			1550	1560	mg/L				0.6	20	
L11763-01AS	AS	05/06/13 15:34	SO4TURB50	100	4700	4840	mg/L	140	90	110			M3

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343086													
WG343086ICV	ICV	05/02/13 15:13	WI130315-7	50		52.07	mg/L	104.1	90	110			
WG343086ICB	ICB	05/02/13 15:31				U	mg/L		-1.5	1.5			
WG343086LFB1	LFB	05/02/13 16:06	WI130501-1	30		30.5	mg/L	101.7	90	110			
WG343086LFB2	LFB	05/03/13 0:33	WI130501-1	30		30.4	mg/L	101.3	90	110			
L11773-02DUP	DUP	05/03/13 1:08			1943	1989	mg/L				2.3	20	
L11773-03AS	AS	05/03/13 2:18	WI130501-1	300	1062	1379.5	mg/L	105.8	90	110			
L11773-03AS	AS	05/03/13 13:32	WI130501-1	600	1055.4	1676.9	mg/L	103.6	90	110			

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343123													
WG343123ICV	ICV	05/03/13 11:09	MS130416-2	.05		.05431	mg/L	108.6	90	110			
WG343123ICB	ICB	05/03/13 11:12				U	mg/L		-0.0003	0.0003			
WG343123LFB	LFB	05/03/13 11:15	MS130329-1	.05005		.05136	mg/L	102.6	85	115			
L11642-03AS	AS	05/03/13 11:22	MS130329-1	.05005	U	.05105	mg/L	102	70	130			
L11642-03ASD	ASD	05/03/13 11:25	MS130329-1	.05005	U	.05169	mg/L	103.3	70	130	1.25	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11775**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11775-02	WG343165	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).
	WG343182	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG343220	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11775**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11775
Date Received: 04/26/2013 11:38
Received By: gac
Date Printed: 4/29/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
3490	3	13	Yes

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



Laboratories, Inc.

41775

CHAIN of CUSTODY

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

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE-TIME

Matrix

of Containers

SO4 by EPA 300 or EPA 375

Quarterly

M-20

4/23/13 : 0902

GW

1

X

MH-11

4/23/13 : 1116

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

UPS Tracking # 1Z 867 7E4 23 1001 097 9

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

RELINQUISHED BY:

DATE-TIME

RECEIVED BY

DATE-TIME

Jeff Joy

4/25/13 : 1530

1780

4-26-13 9:30



May 20, 2013

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: ZS000003Q8

ACZ Project ID: L11886

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 03, 2013. This project has been assigned to ACZ's project number, L11886. 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 L11886. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 19, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: M-9

ACZ Sample ID: **L11886-01**

Date Sampled: 05/01/13 12:10

Date Received: 05/03/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	66.05			mg/L	0.5	2.5	05/16/13 11:18	tcd

Arizona license number: **AZ0102**

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11886**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG343765													
WG343765LFB	LFB	05/16/13 9:50	WI130501-1	30		30.33	mg/L	101.1	90	110			
L11694-04DUP	DUP	05/16/13 10:25			142.79	142.59	mg/L				0.1	20	
L11755-01AS	AS	05/16/13 11:00	WI130501-1	300	368.8	684.5	mg/L	105.2	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11886**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11886**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11886
Date Received: 05/03/2013 10:00
Received By: ksj
Date Printed: 5/3/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
4100	4.7	15	Yes

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



Laboratories, Inc.

L11886

CHAIN of CUSTODY

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

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

of Containers

SO4 by EPA 300 or EPA 375

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

M-9

5/1/13 : 1210

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 1001 172 7

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

RECEIVED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

Jeff Joy

5/1/13 : 1530

[Signature]

5/3/13 10:00



May 20, 2013

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: ZS000003Q8

ACZ Project ID: L11989

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 10, 2013. This project has been assigned to ACZ's project number, L11989. 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 L11989. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 19, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: HAVENGOLF

ACZ Sample ID: **L11989-01**

Date Sampled: 05/07/13 09:00

Date Received: 05/10/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	2	105.13		*	mg/L	1	5	05/16/13 1:26	tcd

Arizona license number: **AZ0102**

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11989**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG343679LFB1	LFB	05/15/13 13:28	WI130501-1	30		31.54	mg/L	105.1	90	110			
WG343679LFB2	LFB	05/15/13 22:14	WI130501-1	30		31.06	mg/L	103.5	90	110			
L11947-06DUP	DUP	05/15/13 22:49			U	U	mg/L				0	20	RA
L11961-01AS	AS	05/15/13 23:59	WI130501-1	1500	3192.1	4752.2	mg/L	104	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11989**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11989-01	WG343679	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L11989**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11989
Date Received: 05/10/2013 09:59
Received By: ksj
Date Printed: 5/10/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
2325	3.1	15	Yes

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

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

July 8, 2013

Cc: Ben Daigneau

Project ID: ZS000003Q8
ACZ Project ID: L12127- **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 17, 2013. This project was assigned to ACZ's project number, **L12127**. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L12127**. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CCGV

ACZ Sample ID: **L12127-01**

Date Sampled: 05/14/13 09:58

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	2	148			mg/L	1	5	05/22/13 20:45	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-3A

ACZ Sample ID: **L12127-02**

Date Sampled: 05/14/13 10:50

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1600		*	mg/L	100	500	05/28/13 17:21	bsu

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-8

ACZ Sample ID: **L12127-03**

Date Sampled: 05/14/13 11:00

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1700		*	mg/L	100	500	05/28/13 17:23	bsu

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-12

ACZ Sample ID: **L12127-04**

Date Sampled: 05/14/13 11:40

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1500		*	mg/L	100	500	05/28/13 17:23	bsu

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-15

ACZ Sample ID: **L12127-05**

Date Sampled: 05/14/13 11:50

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1700		*	mg/L	100	500	05/28/13 17:23	bsu

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-19

ACZ Sample ID: **L12127-06**

Date Sampled: 05/14/13 11:58

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1600		*	mg/L	100	500	05/28/13 17:23	bsu

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-10

ACZ Sample ID: **L12127-07**

Date Sampled: 05/15/13 08:51

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	52.4			mg/L	0.5	2.5	05/22/13 21:03	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-6

ACZ Sample ID: **L12127-08**

Date Sampled: 05/15/13 09:43

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	2	91.9			mg/L	1	5	05/23/13 15:19	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-9

ACZ Sample ID: **L12127-09**

Date Sampled: 05/15/13 10:50

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	45.8			mg/L	0.5	2.5	05/22/13 22:13	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8
Sample ID: DUP20130515A

ACZ Sample ID: **L12127-10**
Date Sampled: 05/15/13 00:00
Date Received: 05/17/13
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	52.8			mg/L	0.5	2.5	05/22/13 22:30	tcd

Arizona license number: **AZ0102**


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.02		.02079	mg/L	104	90	110			
WG344364ICB	ICB	05/25/13 3:51				.0004	mg/L		-0.0012	0.0012			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.01		.01004	mg/L	100.4	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.02	U	.02098	mg/L	104.9	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.02	U	.02084	mg/L	104.2	70	130	0.67	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.02	U	.02414	mg/L	120.7	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.02	U	.02448	mg/L	122.4	70	130	1.4	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.05211	mg/L	104.2	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.0006	0.0006			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.05005		.04916	mg/L	98.2	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1001	.0025	.11168	mg/L	109.1	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1001	.0025	.11296	mg/L	110.3	70	130	1.14	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1001	.0029	.11526	mg/L	112.2	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1001	.0029	.11716	mg/L	114.1	70	130	1.63	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.04739	mg/L	94.8	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.00015	0.00015			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.0501		.04708	mg/L	94	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1002	.0043	.1077	mg/L	103.2	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1002	.0043	.1075	mg/L	103	70	130	0.19	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1002	U	.10516	mg/L	105	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1002	U	.1081	mg/L	107.9	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
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.05291	mg/L	105.8	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.0003	0.0003			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.0501		.05143	mg/L	102.7	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1002	.0372	.14244	mg/L	105	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1002	.0372	.1425	mg/L	105.1	70	130	0.04	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1002	U	.10604	mg/L	105.8	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1002	U	.10884	mg/L	108.6	70	130	2.61	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344214													
WG344214ICV	ICV	05/24/13 23:51	II130510-1	2		1.986	mg/L	99.3	95	105			
WG344214ICB	ICB	05/24/13 23:57				U	mg/L		-0.03	0.03			
WG344214LFB	LFB	05/25/13 0:09	II130502-1	.5		.509	mg/L	101.8	85	115			
L12126-03AS	AS	05/25/13 0:59	II130502-1	.5	U	.5	mg/L	100	85	115			
L12126-03ASD	ASD	05/25/13 1:02	II130502-1	.5	U	.505	mg/L	101	85	115	1	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344079													
WG344079ICV	ICV	05/23/13 4:17	II130510-1	2.002		2.031	mg/L	101.4	95	105			
WG344079ICB	ICB	05/23/13 4:23				.012	mg/L		-0.03	0.03			
WG344079LFB	LFB	05/23/13 4:35	II130502-1	.5		.509	mg/L	101.8	85	115			
L12126-05AS	AS	05/23/13 5:28	II130502-1	.5	.01	.534	mg/L	104.8	85	115			
L12126-05ASD	ASD	05/23/13 5:31	II130502-1	.5	.01	.532	mg/L	104.4	85	115	0.38	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344079													
WG344079ICV	ICV	05/23/13 4:17	II130510-1	2		1.992	mg/L	99.6	95	105			
WG344079ICB	ICB	05/23/13 4:23				.013	mg/L		-0.03	0.03			
WG344079LFB	LFB	05/23/13 4:35	II130502-1	.5		.513	mg/L	102.6	85	115			
L12126-05AS	AS	05/23/13 5:28	II130502-1	.5	.01	.551	mg/L	108.2	85	115			
L12126-05ASD	ASD	05/23/13 5:31	II130502-1	.5	.01	.548	mg/L	107.6	85	115	0.55	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344248													
WG344248ICV	ICV	05/23/13 14:12	WC130510-	2.002		1.98	mg/L	98.9	95	105			
WG344248ICB	ICB	05/23/13 14:19				U	mg/L		-0.3	0.3			
WG344246													
WG344246ICV	ICV	05/23/13 15:17	WC130510-	2.002		1.96	mg/L	97.9	95	105			
WG344246ICB	ICB	05/23/13 15:22				U	mg/L		-0.3	0.3			
WG344246LFB1	LFB	05/23/13 15:29	WC130313-	5.005		4.75	mg/L	94.9	90	110			
L12046-03AS	AS	05/23/13 16:44	WC130313-	5.005	1.2	6.01	mg/L	96.1	90	110			
L12046-03DUP	DUP	05/23/13 16:48			1.2	1.25	mg/L				4.1	20	
WG344246LFB2	LFB	05/23/13 17:38	WC130313-	5.005		4.8	mg/L	95.9	90	110			
L12127-05AS	AS	05/23/13 17:45	WC130313-	5.005	.2	4.89	mg/L	93.7	90	110			
L12127-05DUP	DUP	05/23/13 17:48			.2	.22	mg/L				9.5	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.05404	mg/L	108.1	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.0003	0.0003			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.05005		.05185	mg/L	103.6	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1001	U	.1108	mg/L	110.7	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1001	U	.11044	mg/L	110.3	70	130	0.33	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1001	.0004	.11284	mg/L	112.3	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1001	.0004	.11538	mg/L	114.9	70	130	2.23	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344079													
WG344079ICV	ICV	05/23/13 4:17	II130510-1	100		101.75	mg/L	101.8	95	105			
WG344079ICB	ICB	05/23/13 4:23				U	mg/L		-0.6	0.6			
WG344079LFB	LFB	05/23/13 4:35	II130502-1	49.99941		51.64	mg/L	103.3	85	115			
L12126-05AS	AS	05/23/13 5:28	II130502-1	49.99941	10.7	66.03	mg/L	110.7	85	115			
L12126-05ASD	ASD	05/23/13 5:31	II130502-1	49.99941	10.7	65.92	mg/L	110.4	85	115	0.17	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344079													
WG344079ICV	ICV	05/23/13 4:17	II130510-1	2		2.023	mg/L	101.2	95	105			
WG344079ICB	ICB	05/23/13 4:23				U	mg/L		-0.06	0.06			
WG344079LFB	LFB	05/23/13 4:35	II130502-1	.5		.524	mg/L	104.8	85	115			
L12126-05AS	AS	05/23/13 5:28	II130502-1	.5	.47	.995	mg/L	105	85	115			
L12126-05ASD	ASD	05/23/13 5:31	II130502-1	.5	.47	1.003	mg/L	106.6	85	115	0.8	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.05242	mg/L	104.8	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.0018	0.0018			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.05005		.05018	mg/L	100.3	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1001	.286	.392	mg/L	105.9	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1001	.286	.3938	mg/L	107.7	70	130	0.46	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1001	U	.0967	mg/L	96.6	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1001	U	.1001	mg/L	100	70	130	3.46	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
WG344369													
WG344369ICV	ICV	05/25/13 14:05	WI130411-3	2.416		2.506	mg/L	103.7	90	110			
WG344369ICB	ICB	05/25/13 14:07				U	mg/L		-0.06	0.06			
WG344369LFB1	LFB	05/25/13 14:10	WI130215-3	2		2.119	mg/L	106	90	110			
WG344369LFB2	LFB	05/25/13 14:44	WI130215-3	2		2.025	mg/L	101.3	90	110			
L12127-02AS	AS	05/25/13 14:46	WI130215-3	2	.69	2.741	mg/L	102.6	90	110			
L12127-03DUP	DUP	05/25/13 14:51			.49	.491	mg/L				0.2	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343904													
WG343904PBW	PBW	05/17/13 14:07				U	mg/L		-20	20			
WG343904LCSW	LCSW	05/17/13 14:09	PCN42164	260		250	mg/L	96.2	80	120			
L12130-01DUP	DUP	05/17/13 15:07			3040	3026	mg/L				0.5	10	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.05245	mg/L	104.9	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.0003	0.0003			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.05005		.04925	mg/L	98.4	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1001	U	.11198	mg/L	111.9	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1001	U	.11162	mg/L	111.5	70	130	0.32	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1001	.0006	.11052	mg/L	109.8	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1001	.0006	.1132	mg/L	112.5	70	130	2.4	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344446													
WG344446ICB	ICB	05/28/13 12:46				U	mg/L		-3	3			
WG344446ICV	ICV	05/28/13 12:46	WI130520-7	20		20.5	mg/L	102.5	90	110			
WG344446LFB	LFB	05/28/13 16:49	WI130416-3	9.99		9.5	mg/L	95.1	90	110			
L12126-03DUP	DUP	05/28/13 17:17			600	607	mg/L				1.2	20	
L12126-05AS	AS	05/28/13 17:21	SO4TURB20	10	290	284	mg/L	-60	90	110			M3

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG344142													
WG344142LFB1	LFB	05/22/13 16:40	WI130501-1	30		30.72	mg/L	102.4	90	110			
L12102-01DUP	DUP	05/22/13 17:50			3165.1	3153	mg/L				0.4	20	
L12102-02AS	AS	05/22/13 18:25	WI130501-1	3000	1892	5048	mg/L	105.2	90	110			
L12127-07DUP	DUP	05/22/13 21:20			52.35	52.83	mg/L				0.9	20	
L12127-08AS	AS	05/22/13 21:55	WI130501-1	30	89.3	116.82	mg/L	91.7	90	110			
WG344142LFB2	LFB	05/23/13 1:08	WI130501-1	30		30.82	mg/L	102.7	90	110			
L12127-08AS	AS	05/23/13 15:36	WI130501-1	60	91.94	153.55	mg/L	102.7	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344364													
WG344364ICV	ICV	05/25/13 3:48	MS130416-2	.05		.05342	mg/L	106.8	90	110			
WG344364ICB	ICB	05/25/13 3:51				U	mg/L		-0.0003	0.0003			
WG344364LFB	LFB	05/25/13 3:54	MS130508-1	.05005		.05079	mg/L	101.5	85	115			
L12040-01AS	AS	05/25/13 4:26	MS130508-1	.1001	U	.1102	mg/L	110.1	70	130			
L12040-01ASD	ASD	05/25/13 4:29	MS130508-1	.1001	U	.11036	mg/L	110.2	70	130	0.15	20	
L12127-06AS	AS	05/25/13 5:11	MS130508-1	.1001	U	.11154	mg/L	111.4	70	130			
L12127-06ASD	ASD	05/25/13 5:15	MS130508-1	.1001	U	.11526	mg/L	115.1	70	130	3.28	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12127-02	WG344446	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.
L12127-03	WG344446	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.
L12127-04	WG344446	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.
L12127-05	WG344246	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).
	WG344446	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.
L12127-06	WG344246	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).
	WG344446	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12127**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12127
Date Received: 05/17/2013 10:33
Received By: ksj
Date Printed: 5/17/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
2594	4	12	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



Laboratories, Inc.

L12127

CHAIN OF CUSTODY

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

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

of Containers

SO4 by EPA 300 or EPA 375

Quarterly

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

CCGV	5/14/13 : 0958	GW	1	X															
IW-3A	5/14/13 : 1050	GW	3		X														
IW-8	5/14/13 : 1100	GW	3		X														
IW-12	5/14/13 : 1140	GW	3		X														
IW-15	5/14/13 : 1150	GW	3		X														
IW-19	5/14/13 : 1158	GW	3		X														
CW-10	5/15/13 : 0851	GW	1	X															
CW-6	5/15/13 : 0943	GW	1	X															
CW-9	5/15/13 : 1050	GW	1	X															
DUP20130515A	5/15/13 : 0000	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 1001 171 8

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

RELINQUISHED BY

DATE/TIME

RECEIVED BY

DATE/TIME

Jeff Joy

5/16/13 : 1530

LOE

5-17-13 10:33

May 28, 2013

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: ZS000003Q8

ACZ Project ID: L12128

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 17, 2013. This project has been assigned to ACZ's project number, L12128. 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 L12128. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 27, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: GV-1

ACZ Sample ID: **L12128-01**

Date Sampled: 05/16/13 08:33

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	38.80			mg/L	0.5	2.5	05/22/13 23:23	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: GV-2

ACZ Sample ID: **L12128-02**

Date Sampled: 05/16/13 09:13

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	63.14			mg/L	0.5	2.5	05/22/13 23:40	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: SIWELL

ACZ Sample ID: **L12128-03**

Date Sampled: 05/16/13 10:18

Date Received: 05/17/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	6.10			mg/L	0.5	2.5	05/22/13 23:58	tcd

Arizona license number: **AZ0102**

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12128**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG344142													
WG344142LFB1	LFB	05/22/13 16:40	WI130501-1	30		30.72	mg/L	102.4	90	110			
L12127-07DUP	DUP	05/22/13 21:20			52.35	52.83	mg/L				0.9	20	
L12127-08AS	AS	05/22/13 21:55	WI130501-1	30	89.3	116.82	mg/L	91.7	90	110			
WG344142LFB2	LFB	05/23/13 1:08	WI130501-1	30		30.82	mg/L	102.7	90	110			
L12127-08AS	AS	05/23/13 15:36	WI130501-1	60	91.94	153.55	mg/L	102.7	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12128**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12128**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12128
Date Received: 05/17/2013 10:33
Received By: ksj
Date Printed: 5/17/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
2594	4	12	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



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

4. $\text{C}_2\text{H}_5\text{COOH} + \text{KOH} \rightarrow \text{C}_2\text{H}_5\text{COOK} + \text{H}_2\text{O}$

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: 520-648-8844

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-393-2714

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

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

PROJECT INFORMATION

ANALYSIS REQUESTED (attach list or use quote marks)



[illegible]

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 1001 171 8

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

INQUIRED BY:		DATE / TIME		RECEIVED BY:		DATE / TIME	
Jeff Joy		5/16/13	1530			5/17/13	10:33

May 23, 2013

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: ZS000003Q8

ACZ Project ID: L12157

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 20, 2013. This project has been assigned to ACZ's project number, L12157. 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 L12157. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 22, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold Copper - Sierrita

May 23, 2013

Project ID: ZS000003Q8

ACZ Project ID: L12157

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 3 ground water samples from FMI Gold & Copper - Sierrita on May 20, 2013. 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 L12157. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. This project is a client requested re-analysis of some earlier reported samples.

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-1C

ACZ Sample ID: **L12157-01**

Date Sampled: 04/08/13 12:58

Date Received: 05/20/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	10	425.0	H	*	mg/L	5	25	05/22/13 1:10	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-3B

ACZ Sample ID: **L12157-02**

Date Sampled: 04/09/13 12:40

Date Received: 05/20/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	37.54	H	*	mg/L	0.5	2.5	05/22/13 1:28	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: M-8

ACZ Sample ID: **L12157-03**

Date Sampled: 04/17/13 15:26

Date Received: 05/20/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	5	140.61	H	*	mg/L	2.5	12.5	05/22/13 14:55	tcd

Arizona license number: **AZ0102**


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12157**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG344045													
WG344045LFB1	LFB	05/21/13 13:13	WI130501-1	30		30.66	mg/L	102.2	90	110			
WG344045LFB2	LFB	05/21/13 21:40	WI130501-1	30		30.14	mg/L	100.5	90	110			
L12041-04DUP	DUP	05/21/13 22:15			U	U	mg/L				0	20	RA
L12041-05AS	AS	05/22/13 13:45	WI130501-1	150	178.59	333.78	mg/L	103.5	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12157**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12157-01	WG344045	Sulfate	M300.0 - Ion Chromatography	H3	Sample was received and analyzed past holding time.
			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).
L12157-02	WG344045	Sulfate	M300.0 - Ion Chromatography	H3	Sample was received and analyzed past holding time.
			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).
L12157-03	WG344045	Sulfate	M300.0 - Ion Chromatography	H3	Sample was received and analyzed past holding time.
			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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12157**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L11560
Date Received: 04/12/2013 09:20
Received By: ksj
Date Printed: 4/12/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3869	3.8	11	Yes

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

Relog L12157

L1560 → LPL 5-10-13

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800)334-6483

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: 520-648-8844

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

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.

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

of Containers

SO4 by EPA 300 or EPA 375

MO-2007-1A	4/8/2013 ; 1002	GW	1	X															
MO-2007-1B	4/8/2013 ; 1200	GW	1	X															
MO-2007-1C	4/8/2013 ; 1258	GW	1	X															
MO-2007-2	4/8/2013 ; 1456	GW	1	X															
MO-2007-3B	4/9/2013 ; 1240	GW	1	X															
MO-2007-3C	4/9/2013 ; 1246	GW	1	X															
MO-2007-6A	4/9/2013 ; 1419	GW	1	X															
MO-2007-6B	4/9/2013 ; 1541	GW	1	X															
DUP20130409A	4/9/2013	GW	1	X															
MO-2007-4B	4/10/2013 ; 1146	GW	1	X															

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

UPS Tracking # 1Z 867 7E4 23 1001 090 6

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

Jeff Joy

4/11/13 ; 1500

FRMAD050.01.15.09

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

May 28, 2013

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: ZS000003Q8

ACZ Project ID: L12188

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 22, 2013. This project has been assigned to ACZ's project number, L12188. 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 L12188. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 27, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: M-8

ACZ Sample ID: **L12188-01**

Date Sampled: 05/21/13 10:49

Date Received: 05/22/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	28.85			mg/L	0.5	2.5	05/23/13 2:18	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-3B

ACZ Sample ID: **L12188-02**

Date Sampled: 05/21/13 12:59

Date Received: 05/22/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	26.96			mg/L	0.5	2.5	05/23/13 2:53	tcd

Arizona license number: **AZ0102**


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12188**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG344142													
WG344142LFB1	LFB	05/22/13 16:40	WI130501-1	30		30.72	mg/L	102.4	90	110			
WG344142LFB2	LFB	05/23/13 1:08	WI130501-1	30		30.82	mg/L	102.7	90	110			
L12188-01DUP	DUP	05/23/13 2:35			28.85	28.85	mg/L				0	20	
L12188-02AS	AS	05/23/13 3:10	WI130501-1	30	26.96	57.28	mg/L	101.1	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12188**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
--------	---------	-----------	--------	------	-------------

No extended qualifiers associated with this analysis

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12188**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12188
Date Received: 05/22/2013 09:54
Received By: ksj
Date Printed: 5/22/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
3711	2.1	12	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

June 10, 2013

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: ZS000003Q8

ACZ Project ID: L12268

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 24, 2013. This project has been assigned to ACZ's project number, L12268. 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 L12268. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after July 10, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: ESP-4

ACZ Sample ID: **L12268-01**

Date Sampled: 05/20/13 09:40

Date Received: 05/24/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	10	581.6			mg/L	5	25	06/04/13 1:28	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: ESP-2

ACZ Sample ID: **L12268-02**

Date Sampled: 05/20/13 11:33

Date Received: 05/24/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	27.86			mg/L	0.5	2.5	06/04/13 2:03	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: ESP-3

ACZ Sample ID: **L12268-03**

Date Sampled: 05/22/13 10:59

Date Received: 05/24/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	35.87			mg/L	0.5	2.5	06/04/13 17:46	jlf

Arizona license number: **AZ0102**


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12268**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG344814													
WG344814LFB1	LFB	06/03/13 17:18	WI130501-1	30		30.4	mg/L	101.3	90	110			
L12263-01DUP	DUP	06/03/13 21:58			1120.3	1151.2	mg/L				2.7	20	
L12263-02AS	AS	06/03/13 22:33	WI130501-1	3000	4861	7917	mg/L	101.9	90	110			
L12389-04DUP	DUP	06/04/13 4:23			358.28	365.61	mg/L				2	20	
L12263-01DUP	DUP	06/04/13 16:53			1175	1182.9	mg/L				0.7	20	
WG344814LFB2	LFB	06/04/13 17:28	WI130501-1	30		32.15	mg/L	107.2	90	110			
L12389-06AS	AS	06/04/13 19:31	WI130501-1	60	81.55	143.3	mg/L	102.9	90	110			

FMI Gold & Copper - SierritaACZ Project ID: **L12268**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12268**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12268
Date Received: 05/24/2013 09:54
Received By: ksj
Date Printed: 5/28/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA17658	5	10	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5469

CHAIN OF CUSTODY

112268

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE TIME

Matrix

of Containers

SO4 by EPA 300 or EPA 375

ESP-4

5/20/13 : 0940

GW

1

X

ESP-2

5/20/13 : 1133

GW

1

X

ESP-3

5/22/13 : 1059

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 1001 099 7

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

RELINQUISHED BY

DATE TIME

RECEIVED BY

DATE TIME

Jeff Joy

5/23/13 : 1530

106

5.24.13 9:40



June 24, 2013

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: ZS000003Q8

ACZ Project ID: L12553

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 07, 2013. This project has been assigned to ACZ's project number, L12553. 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 L12553. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after July 24, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-30

ACZ Sample ID: **L12553-01**

Date Sampled: 06/06/13 11:55

Date Received: 06/07/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	100	1760			mg/L	50	250	06/19/13 2:20	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: DUP20130606A

ACZ Sample ID: **L12553-02**

Date Sampled: 06/06/13 00:00

Date Received: 06/07/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	100	1800			mg/L	50	250	06/19/13 2:37	tcd

Arizona license number: **AZ0102**


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12553**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG343679													
WG343679ICV	ICV	05/15/13 12:35	WI130315-7	50		51.86	mg/L	103.7	90	110			
WG343679ICB	ICB	05/15/13 12:53				U	mg/L		-1.5	1.5			
WG345810													
WG345810LFB1	LFB	06/18/13 14:57	WI130501-1	30		31.6	mg/L	105.3	90	110			
WG345810LFB2	LFB	06/18/13 23:25	WI130501-1	30		31	mg/L	103.3	90	110			
L12578-01AS	AS	06/19/13 3:12	WI130501-1	30	28	58.5	mg/L	101.7	90	110			
L12578-01DUP	DUP	06/19/13 3:30			28	28	mg/L				0	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12553**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12553**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12553
Date Received: 06/07/2013 10:07
Received By: ksj
Date Printed: 6/10/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3822	5.3	13	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

July 08, 2013

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: ZS000003Q8

ACZ Project ID: L12705

Jon Anderson:

Enclosed are revised analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 14, 2013 and originally reported on July 08, 2013. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L12705. 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 L12705. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 07, 2013. 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold Copper - Sierrita

July 08, 2013

Project ID: ZS000003Q8

ACZ Project ID: L12705

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 6 ground water samples from FMI Gold & Copper - Sierrita on June 14, 2013. 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 L12705. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. This project has been revised to report a revised value for Sulfate on L12705-02. The original data point had an incorrect dilution recorded.

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: PZ-7

ACZ Sample ID: **L12705-01**

Date Sampled: 06/10/13 11:13

Date Received: 06/14/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	10	500		*	mg/L	5	25	06/25/13 16:03	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-10

ACZ Sample ID: **L12705-02**

Date Sampled: 06/10/13 15:12

Date Received: 06/14/13

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0008	0.004	06/19/13 9:36	pmc
Arsenic, dissolved	M200.8 ICP-MS	2	0.0013	B		mg/L	0.0004	0.002	06/19/13 9:36	pmc
Beryllium, dissolved	M200.8 ICP-MS	2		U	*	mg/L	0.0001	0.0005	06/19/13 9:36	pmc
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	06/19/13 9:36	pmc
Chromium, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/20/13 21:24	aeb
Cobalt, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/20/13 21:24	aeb
Copper, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/20/13 21:24	aeb
Lead, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	06/19/13 9:36	pmc
Magnesium, dissolved	M200.7 ICP	2	92.6			mg/L	0.4	2	06/20/13 21:24	aeb
Molybdenum, dissolved	M200.7 ICP	2	0.07	B		mg/L	0.04	0.2	06/20/13 21:24	aeb
Nickel, dissolved	M200.8 ICP-MS	2		U		mg/L	0.001	0.006	06/19/13 9:36	pmc
Selenium, dissolved	M200.8 ICP-MS	2	0.0007			mg/L	0.0002	0.0005	06/19/13 9:36	pmc
Thallium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	06/19/13 9:36	pmc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	1	0.2	B		mg/L	0.1	0.5	06/21/13 17:22	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	1.22			mg/L	0.02	0.1	06/26/13 0:23	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	2800			mg/L	10	20	06/15/13 9:29	mss3
Sulfate	D516-02 - Turbidimetric	50	1720		*	mg/L	50	300	07/02/13 14:27	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: PZ-8

ACZ Sample ID: **L12705-03**

Date Sampled: 06/11/13 09:45

Date Received: 06/14/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	10	380		*	mg/L	5	25	06/25/13 16:20	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-5B

ACZ Sample ID: **L12705-04**

Date Sampled: 06/12/13 10:07

Date Received: 06/14/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	10	430		*	mg/L	5	25	06/25/13 16:38	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-3

ACZ Sample ID: **L12705-05**

Date Sampled: 06/13/13 07:43

Date Received: 06/14/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	70.8		*	mg/L	0.5	2.5	06/25/13 16:55	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-5C

ACZ Sample ID: **L12705-06**

Date Sampled: 06/13/13 13:01

Date Received: 06/14/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	5	251		*	mg/L	2.5	12.5	06/25/13 17:13	tcd

Arizona license number: AZ0102

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12705**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.02		.02124	mg/L	106.2	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0012	0.0012			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.01		.00983	mg/L	98.3	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.01	U	.00958	mg/L	95.8	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.01	U	.00951	mg/L	95.1	70	130	0.73	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.0522	mg/L	104.4	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0006	0.0006			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.05005		.04907	mg/L	98	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.05005	U	.05455	mg/L	109	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.05005	U	.05393	mg/L	107.8	70	130	1.14	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.04759	mg/L	95.2	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.00015	0.00015			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.0501		.04732	mg/L	94.5	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.0501	.00408	.05722	mg/L	106.1	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.0501	.00408	.0549	mg/L	101.4	70	130	4.14	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.05095	mg/L	101.9	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0003	0.0003			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.0501		.04972	mg/L	99.2	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.0501	.0131	.05932	mg/L	92.3	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.0501	.0131	.05938	mg/L	92.4	70	130	0.1	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346081													
WG346081ICV	ICV	06/20/13 20:10	II130510-1	2		1.973	mg/L	98.7	95	105			
WG346081ICB	ICB	06/20/13 20:16				U	mg/L		-0.03	0.03			
WG346081LFB	LFB	06/20/13 20:28	II130617-2	.5		.503	mg/L	100.6	85	115			
L12736-01AS	AS	06/20/13 21:50	II130617-2	.5	U	.501	mg/L	100.2	85	115			
L12736-01ASD	ASD	06/20/13 21:53	II130617-2	.5	U	.507	mg/L	101.4	85	115	1.19	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12705**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346081													
WG346081ICV	ICV	06/20/13 20:10	II130510-1	2.002		2.02	mg/L	100.9	95	105			
WG346081ICB	ICB	06/20/13 20:16				U	mg/L		-0.03	0.03			
WG346081LFB	LFB	06/20/13 20:28	II130617-2	.5		.496	mg/L	99.2	85	115			
L12736-01AS	AS	06/20/13 21:50	II130617-2	.5	U	.5	mg/L	100	85	115			
L12736-01ASD	ASD	06/20/13 21:53	II130617-2	.5	U	.503	mg/L	100.6	85	115	0.6	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346081													
WG346081ICV	ICV	06/20/13 20:10	II130510-1	2		1.964	mg/L	98.2	95	105			
WG346081ICB	ICB	06/20/13 20:16				U	mg/L		-0.03	0.03			
WG346081LFB	LFB	06/20/13 20:28	II130617-2	.5		.502	mg/L	100.4	85	115			
L12736-01AS	AS	06/20/13 21:50	II130617-2	.5	U	.501	mg/L	100.2	85	115			
L12736-01ASD	ASD	06/20/13 21:53	II130617-2	.5	U	.5	mg/L	100	85	115	0.2	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346131													
WG346131ICV	ICV	06/21/13 11:00	WC130618-	2.002		1.92	mg/L	95.9	95	105			
WG346131ICB	ICB	06/21/13 11:04				U	mg/L		-0.3	0.3			
WG346162													
WG346162LFB1	LFB	06/21/13 14:31	WC130313-	5.005		4.57	mg/L	91.3	90	110			
WG346162LFB2	LFB	06/21/13 16:44	WC130313-	5.005		4.67	mg/L	93.3	90	110			
L12704-02AS	AS	06/21/13 16:52	WC130313-	5.005	9.3	14.11	mg/L	96.1	90	110			
L12704-02DUP	DUP	06/21/13 16:55			9.3	9.37	mg/L				0.7	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.05131	mg/L	102.6	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0003	0.0003			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.05005		.04914	mg/L	98.2	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.05005	U	.04981	mg/L	99.5	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.05005	U	.04905	mg/L	98	70	130	1.54	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346081													
WG346081ICV	ICV	06/20/13 20:10	II130510-1	100		98.01	mg/L	98	95	105			
WG346081ICB	ICB	06/20/13 20:16				U	mg/L		-0.6	0.6			
WG346081LFB	LFB	06/20/13 20:28	II130617-2	49.99941		48.33	mg/L	96.7	85	115			
L12736-01AS	AS	06/20/13 21:50	II130617-2	49.99941	.6	48.95	mg/L	96.7	85	115			
L12736-01ASD	ASD	06/20/13 21:53	II130617-2	49.99941	.6	49.24	mg/L	97.3	85	115	0.59	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12705**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346081													
WG346081ICV	ICV	06/20/13 20:10	II130510-1	2		2.005	mg/L	100.3	95	105			
WG346081ICB	ICB	06/20/13 20:16				U	mg/L		-0.06	0.06			
WG346081LFB	LFB	06/20/13 20:28	II130617-2	.5		.494	mg/L	98.8	85	115			
L12736-01AS	AS	06/20/13 21:50	II130617-2	.5	U	.496	mg/L	99.2	85	115			
L12736-01ASD	ASD	06/20/13 21:53	II130617-2	.5	U	.498	mg/L	99.6	85	115	0.4	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.05013	mg/L	100.3	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0018	0.0018			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.05005		.0486	mg/L	97.1	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.05005	.0422	.08848	mg/L	92.5	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.05005	.0422	.08791	mg/L	91.3	70	130	0.65	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
WG346412													
WG346412ICV	ICV	06/25/13 22:37	WI130411-3	2.416		2.398	mg/L	99.3	90	110			
WG346412ICB	ICB	06/25/13 22:38				U	mg/L		-0.06	0.06			
WG346417													
WG346417LFB1	LFB	06/26/13 0:09	WI130215-3	2		2.027	mg/L	101.4	90	110			
WG346417LFB2	LFB	06/26/13 0:44	WI130215-3	2		2.011	mg/L	100.6	90	110			
L12544-01AS	AS	06/26/13 0:53	WI130215-3	40	21.9	62.6	mg/L	101.8	90	110			
L12544-02DUP	DUP	06/26/13 0:55			22	22.35	mg/L				1.6	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345706													
WG345706PBW	PBW	06/15/13 9:10				U	mg/L		-20	20			
WG345706LCSW	LCSW	06/15/13 9:10	PCN42169	260		254	mg/L	97.7	80	120			
L12705-02DUP	DUP	06/15/13 9:29			2800	2780	mg/L				0.7	10	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.05184	mg/L	103.7	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0003	0.0003			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.05005		.05045	mg/L	100.8	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.05005	.0005	.06345	mg/L	125.8	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.05005	.0005	.06146	mg/L	121.8	70	130	3.19	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12705**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346882													
WG346882ICB	ICB	07/02/13 10:31				U	mg/L		-3	3			
WG346882ICV	ICV	07/02/13 10:31	WI130621-8	20		19.5	mg/L	97.5	90	110			
WG346882LFB	LFB	07/02/13 14:05	WI130416-3	9.99		10.9	mg/L	109.1	90	110			
L12709-01AS	AS	07/02/13 14:12	SO4TURB5	10	166	178.4	mg/L	124	90	110			M3
L12705-02DUP	DUP	07/02/13 14:27			1720	1740	mg/L				1.2	20	

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346168													
WG346168ICV	ICV	06/24/13 18:44	WI130624-1	50		50.2	mg/L	100.4	90	110			
WG346168ICB	ICB	06/24/13 19:01				U	mg/L		-1.5	1.5			
WG346231													
WG346231LFB1	LFB	06/25/13 9:03	WI130501-1	30		31.6	mg/L	105.3	90	110			
L12686-09DUP	DUP	06/25/13 13:43			55.3	51	mg/L				8.1	20	
L12686-10AS	AS	06/25/13 14:18	WI130501-1	600	1080	1610	mg/L	88.3	90	110			M2
WG346231LFB2	LFB	06/25/13 17:30	WI130501-1	30		30.1	mg/L	100.3	90	110			

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG345917													
WG345917ICV	ICV	06/19/13 8:00	MS130416-2	.05		.05391	mg/L	107.8	90	110			
WG345917ICB	ICB	06/19/13 8:03				U	mg/L		-0.0003	0.0003			
WG345917LFB	LFB	06/19/13 8:06	MS130614-1	.05005		.05158	mg/L	103.1	85	115			
L12704-01AS	AS	06/19/13 9:11	MS130614-1	.05005	U	.05331	mg/L	106.5	70	130			
L12704-01ASD	ASD	06/19/13 9:20	MS130614-1	.05005	U	.05295	mg/L	105.8	70	130	0.68	20	

FMI Gold & Copper - SierritaACZ Project ID: **L12705**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12705-01	WG346231	Sulfate	M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L12705-02	WG345917	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG346882	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.
L12705-03	WG346231	Sulfate	M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L12705-04	WG346231	Sulfate	M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L12705-05	WG346231	Sulfate	M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L12705-06	WG346231	Sulfate	M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12705**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12705
Date Received: 06/14/2013 10:45
Received By: ksj
Date Printed: 6/14/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3937	2.4	13	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



Laboratories, Inc.

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

12705

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

ANALYSES REQUESTED (attach list or use quote marks)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375	Quarterly															
PZ-7	6/10/13 : 1113	GW	1	X																
MH-10	6/10/13 : 1512	GW	3		X															
PZ-8	6/11/13 : 0945	GW	1	X																
MO-2007-5B	6/12/13 : 1007	GW	1	X																
CW-3	6/13/13 : 0743	GW	1	X																
MO-2007-5C	6/13/13 : 1301	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 1001 102 1

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

RELINQUISHED BY

DATE/TIME

RECEIVED BY

DATE/TIME

Jeff Joy

6/13/13 : 1530

12705

6-14-13 10:45

12705 Chain of Custody

June 27, 2013

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: ZS000003Q8

ACZ Project ID: L12808

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 19, 2013. This project has been assigned to ACZ's project number, L12808. 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 L12808. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after July 27, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CCGV

ACZ Sample ID: **L12808-01**

Date Sampled: 05/14/13 09:58

Date Received: 06/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	10	129	H	*	mg/L	5	25	06/26/13 7:31	tcd

Note: This report is for the re-analysis of the sample previously reported as ACZ project L12127-01.

Arizona license number: AZ0102

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12808**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346168													
WG346168ICV	ICV	06/24/13 18:44	WI130624-1	50		50.2	mg/L	100.4	90	110			
WG346168ICB	ICB	06/24/13 19:01				U	mg/L		-1.5	1.5			
WG346374													
WG346374LFB	LFB	06/25/13 23:21	WI130501-1	30		29.1	mg/L	97	90	110			
L12764-05AS	AS	06/26/13 6:38	WI130501-1	30	14.5	36.8	mg/L	74.3	90	110			M2
L12764-04DUP	DUP	06/26/13 16:03			17.9	17.8	mg/L				0.6	20	

FMI Gold & Copper - SierritaACZ Project ID: **L12808**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12808-01	WG346374	Sulfate	M300.0 - Ion Chromatography	H3	Sample was received and analyzed past holding time.
			M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12808**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12808
Date Received: 06/19/2013 14:02
Received By: gac
Date Printed: 6/19/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Re-analysis of L12127-01

Client Contact Remarks

Shipping Containers

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

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

L12808-Reloc

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-2483

L12124

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

Name: Ben Daigneau
Company: Clear Creek Associates

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

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?
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 ☒

Quote #:	Project/PO #:	Reporting state for compliance testing:	Sampler's Name:	Are any samples NRC licensable material? Yes No	# of Containers	SO4 by EPA 300 or EPA 375	Quarterly											
	ZS000003Q8		Jeff Joy															
CCGV	5/14/13 : 0958	GW	1	X														
IW-3A	5/14/13 : 1050	GW	3				X											
IW-8	5/14/13 : 1100	GW	3				X											
IW-12	5/14/13 : 1140	GW	3				X											
IW-15	5/14/13 : 1150	GW	3				X											
IW-19	5/14/13 : 1158	GW	3				X											
CW-10	5/15/13 : 0851	GW	1	X														
CW-6	5/15/13 : 0943	GW	1	X														
CW-9	5/15/13 : 1050	GW	1	X														
DUP20130515A	5/15/13 : 0000	GW	1	X														

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

UPS Tracking # 1Z 867 7E4 23 1001 171 8

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

Jeff Joy	5/16/13 : 1530		

L12808 Chain of Custody
L12124 Chain of Custody
L12124

July 08, 2013

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: ZS000003Q8

ACZ Project ID: L12833

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 20, 2013. This project has been assigned to ACZ's project number, L12833. 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 L12833. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 07, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: NP-2

ACZ Sample ID: **L12833-01**

Date Sampled: 06/17/13 10:16

Date Received: 06/20/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	71.6			mg/L	0.5	2.5	07/01/13 18:28	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: IW-20

ACZ Sample ID: **L12833-02**

Date Sampled: 06/17/13 11:10

Date Received: 06/20/13

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0008	0.004	07/03/13 4:43	pmc
Arsenic, dissolved	M200.8 ICP-MS	2	0.0021			mg/L	0.0004	0.002	07/03/13 4:43	pmc
Beryllium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0001	0.0005	07/03/13 4:43	pmc
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/13 4:43	pmc
Chromium, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/29/13 1:35	aeb
Cobalt, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/29/13 1:35	aeb
Copper, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/29/13 1:35	aeb
Lead, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/13 4:43	pmc
Magnesium, dissolved	M200.7 ICP	2	126			mg/L	0.4	2	06/29/13 1:35	aeb
Molybdenum, dissolved	M200.7 ICP	2		U		mg/L	0.04	0.2	06/29/13 1:35	aeb
Nickel, dissolved	M200.8 ICP-MS	2		U		mg/L	0.001	0.006	07/03/13 4:43	pmc
Selenium, dissolved	M200.8 ICP-MS	2	0.0010			mg/L	0.0002	0.0005	07/03/13 4:43	pmc
Thallium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/13 4:43	pmc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.5	06/27/13 17:44	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	1.62			mg/L	0.02	0.1	06/28/13 22:12	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	2950			mg/L	10	20	06/22/13 12:50	khw
Sulfate	D516-02 - Turbidimetric	120	1900		*	mg/L	100	600	07/01/13 8:57	bsu

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8
Sample ID: DUP20130617A

ACZ Sample ID: **L12833-03**

Date Sampled: 06/17/13 00:00

Date Received: 06/20/13

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0008	0.004	07/03/13 4:46	pmc
Arsenic, dissolved	M200.8 ICP-MS	2	0.0022			mg/L	0.0004	0.002	07/03/13 4:46	pmc
Beryllium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0001	0.0005	07/03/13 4:46	pmc
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/13 4:46	pmc
Chromium, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/29/13 1:38	aeb
Cobalt, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/29/13 1:38	aeb
Copper, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	06/29/13 1:38	aeb
Lead, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/13 4:46	pmc
Magnesium, dissolved	M200.7 ICP	2	124			mg/L	0.4	2	06/29/13 1:38	aeb
Molybdenum, dissolved	M200.7 ICP	2		U		mg/L	0.04	0.2	06/29/13 1:38	aeb
Nickel, dissolved	M200.8 ICP-MS	2		U		mg/L	0.001	0.006	07/03/13 4:46	pmc
Selenium, dissolved	M200.8 ICP-MS	2	0.0009			mg/L	0.0002	0.0005	07/03/13 4:46	pmc
Thallium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/13 4:46	pmc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	1	0.2	B		mg/L	0.1	0.5	06/27/13 17:58	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	1.63			mg/L	0.02	0.1	06/28/13 22:14	pjb
Residue, Filterable (TDS) @180C	SM2540C	1	2930			mg/L	10	20	06/22/13 12:51	khw
Sulfate	D516-02 - Turbidimetric	100	1800		*	mg/L	100	500	07/01/13 8:44	bsu

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: TMM-1

ACZ Sample ID: **L12833-04**

Date Sampled: 06/19/13 09:51

Date Received: 06/20/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	1.43	B		mg/L	0.5	2.5	07/01/13 18:46	tcd

Arizona license number: **AZ0102**


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12833**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.02		.0215	mg/L	107.5	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0012	0.0012			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.01		.00936	mg/L	93.6	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.01	U	.00904	mg/L	90.4	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.01	U	.00916	mg/L	91.6	70	130	1.32	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.0534	mg/L	106.8	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0006	0.0006			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.05005		.0488	mg/L	97.5	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.05005	.0014	.05375	mg/L	104.6	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.05005	.0014	.05379	mg/L	104.7	70	130	0.07	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.05252	mg/L	105	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.00015	0.00015			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.0501		.04968	mg/L	99.2	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.0501	U	.04845	mg/L	96.7	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.0501	U	.0481	mg/L	96	70	130	0.73	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.0517	mg/L	103.4	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0003	0.0003			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.0501		.04841	mg/L	96.6	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.0501	U	.04853	mg/L	96.9	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.0501	U	.04784	mg/L	95.5	70	130	1.43	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346583													
WG346583ICV	ICV	06/28/13 23:59	II130510-1	2		1.98	mg/L	99	95	105			
WG346583ICB	ICB	06/29/13 0:05				U	mg/L		-0.03	0.03			
WG346583LFB	LFB	06/29/13 0:17	II130621-2	.5		.523	mg/L	104.6	85	115			
L12826-06AS	AS	06/29/13 1:07	II130621-2	.5	U	.52	mg/L	104	85	115			
L12826-06ASD	ASD	06/29/13 1:10	II130621-2	.5	U	.526	mg/L	105.2	85	115	1.15	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12833**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346583													
WG346583ICV	ICV	06/28/13 23:59	II130510-1	2.002		2.029	mg/L	101.3	95	105			
WG346583ICB	ICB	06/29/13 0:05				U	mg/L		-0.03	0.03			
WG346583LFB	LFB	06/29/13 0:17	II130621-2	.5		.516	mg/L	103.2	85	115			
L12826-06AS	AS	06/29/13 1:07	II130621-2	.5	.01	.529	mg/L	103.8	85	115			
L12826-06ASD	ASD	06/29/13 1:10	II130621-2	.5	.01	.526	mg/L	103.2	85	115	0.57	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346583													
WG346583ICV	ICV	06/28/13 23:59	II130510-1	2		1.956	mg/L	97.8	95	105			
WG346583ICB	ICB	06/29/13 0:05				U	mg/L		-0.03	0.03			
WG346583LFB	LFB	06/29/13 0:17	II130621-2	.5		.519	mg/L	103.8	85	115			
L12826-06AS	AS	06/29/13 1:07	II130621-2	.5	U	.521	mg/L	104.2	85	115			
L12826-06ASD	ASD	06/29/13 1:10	II130621-2	.5	U	.521	mg/L	104.2	85	115	0	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346596													
WG346596ICV	ICV	06/27/13 15:41	WC130621-	2.002		1.96	mg/L	97.9	95	105			
WG346596ICB	ICB	06/27/13 15:46				U	mg/L		-0.3	0.3			
WG346596LFB1	LFB	06/27/13 15:55	WC130313-	5.005		4.71	mg/L	94.1	90	110			
L12821-01AS	AS	06/27/13 17:03	WC130313-	5.005	7.8	12.62	mg/L	96.3	90	110			
L12821-01DUP	DUP	06/27/13 17:06			7.8	7.76	mg/L				0.5	20	
L12833-02AS	AS	06/27/13 17:47	WC130313-	5.005	.2	4.82	mg/L	92.3	90	110			
L12833-02DUP	DUP	06/27/13 17:50			.2	.23	mg/L				14	20	RA
WG346596LFB2	LFB	06/27/13 17:55	WC130313-	5.005		4.69	mg/L	93.7	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.0546	mg/L	109.2	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0003	0.0003			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.05005		.04938	mg/L	98.7	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.05005	U	.05133	mg/L	102.6	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.05005	U	.05172	mg/L	103.3	70	130	0.76	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346583													
WG346583ICV	ICV	06/28/13 23:59	II130510-1	100		98.31	mg/L	98.3	95	105			
WG346583ICB	ICB	06/29/13 0:05				.2	mg/L		-0.6	0.6			
WG346583LFB	LFB	06/29/13 0:17	II130621-2	49.99941		50.72	mg/L	101.4	85	115			
L12826-06AS	AS	06/29/13 1:07	II130621-2	49.99941	7.8	58.25	mg/L	100.9	85	115			
L12826-06ASD	ASD	06/29/13 1:10	II130621-2	49.99941	7.8	58.53	mg/L	101.5	85	115	0.48	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12833**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346583													
WG346583ICV	ICV	06/28/13 23:59	II130510-1	2		2.009	mg/L	100.5	95	105			
WG346583ICB	ICB	06/29/13 0:05				U	mg/L		-0.06	0.06			
WG346583LFB	LFB	06/29/13 0:17	II130621-2	.5		.526	mg/L	105.2	85	115			
L12826-06AS	AS	06/29/13 1:07	II130621-2	.5	U	.514	mg/L	102.8	85	115			
L12826-06ASD	ASD	06/29/13 1:10	II130621-2	.5	U	.52	mg/L	104	85	115	1.16	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.053	mg/L	106	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0018	0.0018			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.05005		.04867	mg/L	97.2	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.05005	U	.04762	mg/L	95.1	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.05005	U	.04787	mg/L	95.6	70	130	0.52	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
WG346710													
WG346710ICV	ICV	06/28/13 17:41	WI130411-3	2.416		2.44	mg/L	101	90	110			
WG346710ICB	ICB	06/28/13 17:42				U	mg/L		-0.06	0.06			
WG346716													
WG346716LFB1	LFB	06/28/13 21:54	WI130215-3	2		2.027	mg/L	101.4	90	110			
L12833-02AS	AS	06/28/13 22:13	WI130215-3	2	1.62	3.544	mg/L	96.2	90	110			
L12833-03DUP	DUP	06/28/13 22:15			1.63	1.621	mg/L				0.6	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346208													
WG346208PBW	PBW	06/22/13 12:45				U	mg/L		-20	20			
WG346208LCSW	LCSW	06/22/13 12:46	PCN42881	260		250	mg/L	96.2	80	120			
L12866-03DUP	DUP	06/22/13 13:00			160	158	mg/L				1.3	10	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.05366	mg/L	107.3	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0003	0.0003			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.05005		.05152	mg/L	102.9	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.05005	.0005	.05396	mg/L	106.8	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.05005	.0005	.05454	mg/L	108	70	130	1.07	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12833**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346746													
WG346746ICB	ICB	07/01/13 6:46				U	mg/L		-3	3			
WG346746ICV	ICV	07/01/13 6:46	WI130621-8	20		19.4	mg/L	97	90	110			
WG346746LFB	LFB	07/01/13 8:16	WI130416-3	9.99		10.8	mg/L	108.1	90	110			
L12824-01DUP	DUP	07/01/13 8:43			320	330	mg/L				3.1	20	
L12833-02AS	AS	07/01/13 8:57	SO4TURB12	10.0000008	1900	1850	mg/L	-500	90	110			M3

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346168													
WG346168ICV	ICV	06/24/13 18:44	WI130624-1	50		50.2	mg/L	100.4	90	110			
WG346168ICB	ICB	06/24/13 19:01				U	mg/L		-1.5	1.5			
WG346776													
WG346776LFB1	LFB	07/01/13 12:56	WI130501-1	30		31.1	mg/L	103.7	90	110			
L12832-04DUP	DUP	07/01/13 17:36			23.7	23.6	mg/L				0.4	20	
L12832-05AS	AS	07/01/13 18:11	WI130501-1	30	15.7	46.7	mg/L	103.3	90	110			
WG346776LFB2	LFB	07/02/13 18:41	WI130501-1	30		30.7	mg/L	102.3	90	110			

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346826													
WG346826ICV	ICV	07/03/13 3:13	MS130416-2	.05		.05467	mg/L	109.3	90	110			
WG346826ICB	ICB	07/03/13 3:16				U	mg/L		-0.0003	0.0003			
WG346826LFB	LFB	07/03/13 3:20	MS130614-1	.05005		.04942	mg/L	98.7	85	115			
L12713-01AS	AS	07/03/13 4:11	MS130614-1	.05005	U	.05043	mg/L	100.8	70	130			
L12713-01ASD	ASD	07/03/13 4:14	MS130614-1	.05005	U	.05114	mg/L	102.2	70	130	1.4	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12833**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12833-02	WG346596	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).
	WG346746	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.
L12833-03	WG346746	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L12833**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L12833
Date Received: 06/20/2013 10:29
Received By: gac
Date Printed: 6/20/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3338	0.6	15	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

July 22, 2013

Cc: Ben Daigneau

Project ID: ZS000003Q8
ACZ Project ID: L13140– **SULFATE ONLY**

Jon Anderson:

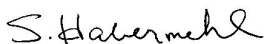
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 9, 2013. This project was assigned to ACZ's project number, **L13140**. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L13140**. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MH-27

ACZ Sample ID: **L13140-01**

Date Sampled: 07/05/13 09:00

Date Received: 07/09/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	100	1080		*	mg/L	100	500	07/12/13 12:55	bsu

Arizona license number: AZ0102

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13140**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347770													
WG347770ICV	ICV	07/18/13 0:11	MS130717-9	.02		.02129	mg/L	106.5	90	110			
WG347770ICB	ICB	07/18/13 0:14				.00057	mg/L		-0.0012	0.0012			
WG347770LFB	LFB	07/18/13 0:17	MS130717-1	.01		.01048	mg/L	104.8	85	115			
L13141-02AS	AS	07/18/13 0:45	MS130717-1	.02	U	.02314	mg/L	115.7	70	130			
L13141-02ASD	ASD	07/18/13 0:55	MS130717-1	.02	U	.02176	mg/L	108.8	70	130	6.15	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.05282	mg/L	105.6	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.0006	0.0006			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.05005		.04919	mg/L	98.3	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.05005	.002	.05248	mg/L	100.9	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.05005	.002	.0542	mg/L	104.3	70	130	3.22	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.04901	mg/L	98	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.00015	0.00015			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.0501		.04624	mg/L	92.3	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.0501	U	.05256	mg/L	104.9	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.0501	U	.05218	mg/L	104.2	70	130	0.73	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.05199	mg/L	104	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.0003	0.0003			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.0501		.04834	mg/L	96.5	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.0501	U	.04915	mg/L	98.1	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.0501	U	.04823	mg/L	96.3	70	130	1.89	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347549													
WG347549ICV	ICV	07/15/13 9:20	II130711-2	2		1.928	mg/L	96.4	95	105			
WG347549ICB	ICB	07/15/13 9:26				U	mg/L		-0.03	0.03			
WG347549LFB	LFB	07/15/13 9:39	II130708-3	.5015		.489	mg/L	97.5	85	115			
L13139-02AS	AS	07/15/13 9:48	II130708-3	.5015	U	.484	mg/L	96.5	85	115			
L13139-02ASD	ASD	07/15/13 9:51	II130708-3	.5015	U	.482	mg/L	96.1	85	115	0.41	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13140**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347549													
WG347549ICV	ICV	07/15/13 9:20	II130711-2	2.002		2.009	mg/L	100.3	95	105			
WG347549ICB	ICB	07/15/13 9:26				U	mg/L		-0.03	0.03			
WG347549LFB	LFB	07/15/13 9:39	II130708-3	.5		.478	mg/L	95.6	85	115			
L13139-02AS	AS	07/15/13 9:48	II130708-3	.5	U	.475	mg/L	95	85	115			
L13139-02ASD	ASD	07/15/13 9:51	II130708-3	.5	U	.469	mg/L	93.8	85	115	1.27	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347549													
WG347549ICV	ICV	07/15/13 9:20	II130711-2	2		1.936	mg/L	96.8	95	105			
WG347549ICB	ICB	07/15/13 9:26				U	mg/L		-0.03	0.03			
WG347549LFB	LFB	07/15/13 9:39	II130708-3	.5		.494	mg/L	98.8	85	115			
L13139-02AS	AS	07/15/13 9:48	II130708-3	.5	U	.502	mg/L	100.4	85	115			
L13139-02ASD	ASD	07/15/13 9:51	II130708-3	.5	U	.502	mg/L	100.4	85	115	0	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347637													
WG347637ICV	ICV	07/16/13 11:43	WC130710-	2.002		1.91	mg/L	95.4	95	105			
WG347637ICB	ICB	07/16/13 11:48				U	mg/L		-0.3	0.3			
WG347637LFB1	LFB	07/16/13 11:56	WC130313-	5.005		4.64	mg/L	92.7	90	110			
L13139-06AS	AS	07/16/13 13:05	WC130313-	5.005	.7	5.37	mg/L	93.3	90	110			
L13139-06DUP	DUP	07/16/13 13:10			.7	.72	mg/L				2.8	20	RA
WG347637LFB2	LFB	07/16/13 15:36	WC130313-	5.005		4.64	mg/L	92.7	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.05223	mg/L	104.5	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.0003	0.0003			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.05005		.04665	mg/L	93.2	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.05005	U	.04552	mg/L	90.9	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.05005	U	.04515	mg/L	90.2	70	130	0.82	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347549													
WG347549ICV	ICV	07/15/13 9:20	II130711-2	100		98.66	mg/L	98.7	95	105			
WG347549ICB	ICB	07/15/13 9:26				U	mg/L		-0.6	0.6			
WG347549LFB	LFB	07/15/13 9:39	II130708-3	49.99752		49.37	mg/L	98.7	85	115			
L13139-02AS	AS	07/15/13 9:48	II130708-3	49.99752	62.7	112.6	mg/L	99.8	85	115			
L13139-02ASD	ASD	07/15/13 9:51	II130708-3	49.99752	62.7	112.2	mg/L	99	85	115	0.36	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13140**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347549													
WG347549ICV	ICV	07/15/13 9:20	II130711-2	2		1.987	mg/L	99.4	95	105			
WG347549ICB	ICB	07/15/13 9:26				U	mg/L		-0.06	0.06			
WG347549LFB	LFB	07/15/13 9:39	II130708-3	.5		.502	mg/L	100.4	85	115			
L13139-02AS	AS	07/15/13 9:48	II130708-3	.5	2.78	3.214	mg/L	86.8	85	115			
L13139-02ASD	ASD	07/15/13 9:51	II130708-3	.5	2.78	3.192	mg/L	82.4	85	115	0.69	20	M3

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.05158	mg/L	103.2	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.0018	0.0018			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.05005		.04717	mg/L	94.2	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.05005	.0013	.04542	mg/L	88.2	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.05005	.0013	.04458	mg/L	86.5	70	130	1.87	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
WG347780													
WG347780ICV	ICV	07/17/13 22:54	WI130712-3	2.416		2.35	mg/L	97.3	90	110			
WG347780ICB	ICB	07/17/13 22:55				U	mg/L		-0.06	0.06			
WG347781													
WG347781LFB1	LFB	07/17/13 23:51	WI130215-3	2		1.975	mg/L	98.8	90	110			
L13139-02DUP	DUP	07/17/13 23:56			.2	.2	mg/L				0	20	
WG347781LFB2	LFB	07/18/13 0:25	WI130215-3	2		1.973	mg/L	98.7	90	110			
L13139-01AS	AS	07/18/13 0:44	WI130215-3	2	.08	1.982	mg/L	95.1	90	110			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347428													
WG347428PBW	PBW	07/11/13 15:05				U	mg/L		-20	20			
WG347428LCSW	LCSW	07/11/13 15:07	PCN42879	260		244	mg/L	93.8	80	120			
L13210-02DUP	DUP	07/11/13 15:38			260	278	mg/L				6.7	10	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.05444	mg/L	108.9	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.0003	0.0003			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.05005		.0501	mg/L	100.1	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.05005	U	.04987	mg/L	99.6	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.05005	U	.04962	mg/L	99.1	70	130	0.5	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13140**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347494													
WG347494ICB	ICB	07/12/13 11:59				U	mg/L		-3	3			
WG347494ICV	ICV	07/12/13 11:59	WI130708-8	20		19.7	mg/L	98.5	90	110			
WG347494LFB	LFB	07/12/13 12:08	WI130416-3	9.99		10.1	mg/L	101.1	90	110			
L13141-02AS	AS	07/12/13 12:58	SO4TURB12	10.0000008	1240	1250	mg/L	100	90	110			
L13141-01DUP	DUP	07/12/13 13:10			1150	1160	mg/L				0.9	20	RA

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG347663													
WG347663ICV	ICV	07/16/13 20:43	MS130416-2	.05		.05209	mg/L	104.2	90	110			
WG347663ICB	ICB	07/16/13 20:46				U	mg/L		-0.0003	0.0003			
WG347663LFB	LFB	07/16/13 20:50	MS130614-1	.05005		.04701	mg/L	93.9	85	115			
L13104-08AS	AS	07/16/13 21:44	MS130614-1	.05005	U	.04598	mg/L	91.9	70	130			
L13104-08ASD	ASD	07/16/13 21:47	MS130614-1	.05005	U	.04579	mg/L	91.5	70	130	0.41	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13140**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13140-01	WG347770	Antimony, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
	WG347663	Arsenic, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
		Beryllium, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
		Cadmium, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
		Lead, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
	WG347549	Molybdenum, dissolved	M200.7 ICP	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.
	WG347663	Nickel, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
		Selenium, dissolved	M200.8 ICP-MS	EF	Sample contains sulfur/organic compounds that may cause false high bias for Selenium results by ICPMS. The sulfur/organic compounds were detected due to matrix odor. Se concentration is estimated.
		Thallium, dissolved	M200.8 ICP-MS	DD	Sample required dilution due to matrix color or odor.
	WG347637	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).
	WG347428	Residue, Filterable (TDS) @180C	SM2540C	QA	Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used.
	WG347494	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13140**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L13140
Date Received: 07/09/2013 10:26
Received By: mtb
Date Printed: 7/9/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3565	4.7	17	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



Laboratories, Inc.

C13140

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

CHAIN of CUSTODY

Report to:

Name: Jonathan Anderson

Company: Freeport McMoRan-Sierrita

E-mail: Jonathan_anderson@fmi.com

Address: 6200 W Duval Mine Rd

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

of Containers

Quarterly

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

MH-27

7/5/13 : 0900

GW

3

x

REMARKS

(POC Wells) Page 2 of 2

UPS Tracking # 1Z 867 7E4 23 1001 105 8

Please filter samples MH-22 (7/1/13) and MH-20 (7/2/13), no preservatives in green dot

Please copy Ben Daigneau this report for sulfate results

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Jeff Joy

7/8/13 : 1530

APL 2-9-13

10:16

July 25, 2013

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: ZS000003Q8

ACZ Project ID: L13273

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 12, 2013. This project has been assigned to ACZ's project number, L13273. 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 L13273. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 24, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4B

ACZ Sample ID: **L13273-01**

Date Sampled: 07/10/13 09:30

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	4.51			mg/L	0.5	2.5	07/22/13 18:45	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4C

ACZ Sample ID: **L13273-02**

Date Sampled: 07/10/13 09:52

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	66.7			mg/L	0.5	2.5	07/22/13 19:37	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4A

ACZ Sample ID: **L13273-03**

Date Sampled: 07/10/13 10:12

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	36.6			mg/L	0.5	2.5	07/22/13 19:55	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-6A

ACZ Sample ID: **L13273-04**

Date Sampled: 07/10/13 11:23

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	18.3			mg/L	0.5	2.5	07/22/13 20:12	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-6B

ACZ Sample ID: **L13273-05**

Date Sampled: 07/10/13 12:16

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	42.0			mg/L	0.5	2.5	07/22/13 20:30	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: GV-1

ACZ Sample ID: **L13273-06**

Date Sampled: 07/11/13 08:55

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	42.6			mg/L	0.5	2.5	07/22/13 20:47	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: GV-2

ACZ Sample ID: **L13273-07**

Date Sampled: 07/11/13 09:29

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	64.2			mg/L	0.5	2.5	07/22/13 21:05	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2009-1

ACZ Sample ID: **L13273-08**

Date Sampled: 07/11/13 11:26

Date Received: 07/12/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	2	118			mg/L	1	5	07/23/13 11:02	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8
Sample ID: DUP20130711A

ACZ Sample ID: **L13273-09**
Date Sampled: 07/11/13 00:00
Date Received: 07/12/13
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	42.5			mg/L	0.5	2.5	07/22/13 22:15	tcd

Arizona license number: AZ0102

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13273**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346168													
WG346168ICV	ICV	06/24/13 18:44	WI130624-1	50		50.2	mg/L	100.4	90	110			
WG346168ICB	ICB	06/24/13 19:01				U	mg/L		-1.5	1.5			
WG347962													
WG347962LFB1	LFB	07/22/13 12:55	WI130501-1	30		29.3	mg/L	97.7	90	110			
L13272-03DUP	DUP	07/22/13 17:35			81.3	81.4	mg/L				0.1	20	
L13272-04AS	AS	07/22/13 18:10	WI130501-1	30	11.5	42.9	mg/L	104.7	90	110			
WG347962LFB2	LFB	07/22/13 21:22	WI130501-1	30		29.8	mg/L	99.3	90	110			
L13273-08DUP	DUP	07/22/13 21:57			115	115	mg/L				0	20	
L13398-01AS	AS	07/23/13 1:27	WI130501-1	30	10.8	41.7	mg/L	103	90	110			
L13273-08DUP	DUP	07/23/13 11:20			118	118	mg/L				0	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13273**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13273**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L13273
Date Received: 07/12/2013 10:18
Received By: mtb
Date Printed: 7/15/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA17977	1.2	13	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



Laboratories, Inc.

L13273

CHAIN of CUSTODY

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

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION DATE:TIME Matrix

MO-2007-4B	7/10/13 : 0930	GW	1	X															
MO-2007-4C	7/10/13 : 0952	GW	1	X															
MO-2007-4A	7/10/13 : 1012	GW	1	X															
MO-2007-6A	7/10/13 : 1123	GW	1	X															
MO-2007-6B	7/10/13 : 1216	GW	1	X															
GV-1	7/11/13 : 0855	GW	1	X															
GV-2	7/11/13 : 0929	GW	1	X															
MO-2009-1	7/11/13 : 1126	GW	1	X															
DUP20130711A	7/11/13 : 0000	GW	1	X															

of Containers

SO4 by EPA 300 or EPA 375

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

REMARKS

MO Wells

UPS Tracking # 1Z 867 7E4 23 1001 107 6

Please copy Ben Daigneau sulfate results for all wells on this CoC

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Jeff Joy

7/11/13 : 1530

LCB

7.12.13 10:18

July 31, 2013

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: ZS000003Q8

ACZ Project ID: L13390

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 19, 2013. This project has been assigned to ACZ's project number, L13390. 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 L13390. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 30, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Sue Webber has reviewed and
approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-10

ACZ Sample ID: **L13390-01**

Date Sampled: 07/17/13 08:48

Date Received: 07/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	54.8			mg/L	0.5	2.5	07/26/13 2:50	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-6

ACZ Sample ID: **L13390-02**

Date Sampled: 07/17/13 09:38

Date Received: 07/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	91.6		*	mg/L	0.5	2.5	07/26/13 3:25	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: CW-9

ACZ Sample ID: **L13390-03**

Date Sampled: 07/17/13 10:31

Date Received: 07/19/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	43.7		*	mg/L	0.5	2.5	07/26/13 4:00	jlf

Arizona license number: AZ0102

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13390**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346168													
WG346168ICV	ICV	06/24/13 18:44	WI130624-1	50		50.2	mg/L	100.4	90	110			
WG346168ICB	ICB	06/24/13 19:01				U	mg/L		-1.5	1.5			
WG348254													
WG348254LFB1	LFB	07/25/13 18:40	WI130501-1	30		32.9	mg/L	109.7	90	110			
WG348254LFB2	LFB	07/26/13 3:08	WI130501-1	30		31.4	mg/L	104.7	90	110			
L13390-02DUP	DUP	07/26/13 3:43			91.6	90.8	mg/L				0.9	20	
L13390-03AS	AS	07/26/13 4:53	WI130501-1	30	43.7	78.5	mg/L	116	90	110			M1
L13385-01AS	AS	07/26/13 14:39	WI130501-1	300	319	638	mg/L	106.3	90	110			
L13385-03DUP	DUP	07/26/13 15:14			220	223	mg/L				1.4	20	

FMI Gold & Copper - SierritaACZ Project ID: **L13390**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13390-02	WG348254	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L13390-03	WG348254	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13390**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L13390
Date Received: 07/19/2013 10:27
Received By: mtb
Date Printed: 7/19/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3679	3.7	12	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



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

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

Telephone: 520-393-2714

Name: Ben Daigneau
Company: Clear Creek Associates

Telephone: 520-622-3222

Name: _____
Company: _____
E-mail: _____

Telephone:

YES
NO

YES

NO

ANALYSES REQUESTED (attach list or use quote number)

Quote #:
Project/PO #: ZS000003Q8
Reporting state for compliance testing:
Sampler's Name: Jeff Joy
Are any samples NRC licensable material? Yes No

of Containers

SO4 by EPA 300 or EPA 375

DATE:TIME

Matrix

CW-10	7/17/13 : 0848
CW-6	7/17/13 : 0938
CW-9	7/17/13 : 1031

1

x

Matrix

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

MO Wells

UPS Tracking # 1Z 867 7E4 23 1001 108 5

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

DATE:TIME

DATE:TIME

Jeff Joy

7/18/13 : 1530

7.19.13 10:27

September 18, 2013

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: ZS000003Q8

ACZ Project ID: L14121

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 28, 2013. This project has been assigned to ACZ's project number, L14121. 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 L14121. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after October 18, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Sue Webber has reviewed and
approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: NP-2

ACZ Sample ID: **L14121-01**

Date Sampled: 08/27/13 08:47

Date Received: 08/28/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	64.3			mg/L	0.5	2.5	09/13/13 1:00	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-3B

ACZ Sample ID: **L14121-02**

Date Sampled: 08/27/13 10:48

Date Received: 08/28/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	3.47			mg/L	0.5	2.5	09/13/13 1:54	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-3C

ACZ Sample ID: **L14121-03**

Date Sampled: 08/27/13 11:59

Date Received: 08/28/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	47.0			mg/L	0.5	2.5	09/13/13 2:12	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: DUP20130827A

ACZ Sample ID: **L14121-04**

Date Sampled: 08/27/13 00:00

Date Received: 08/28/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	4.13			mg/L	0.5	2.5	09/13/13 2:30	tcd

Arizona license number: AZ0102

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L14121**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG350873													
WG350873ICV	ICV	09/09/13 21:16	WI130823-1	50		51.7	mg/L	103.4	90	110			
WG350873ICB	ICB	09/09/13 21:34				U	mg/L		-1.5	1.5			
WG350998													
WG350998LFB1	LFB	09/12/13 19:02	WI130501-1	30		30.8	mg/L	102.7	90	110			
L14107-01DUP	DUP	09/12/13 23:48			53.8	53.8	mg/L				0	20	
WG350998LFB2	LFB	09/13/13 3:41	WI130501-1	30		29.6	mg/L	98.7	90	110			
L14114-01AS	AS	09/13/13 11:58	WI130501-1	1500	1770	3340	mg/L	104.7	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L14121**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L14121**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L14121
Date Received: 08/28/2013 09:50
Received By: mtb
Date Printed: 8/28/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3310	0.9	15	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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



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

CHAIN of CUSTODY

Telephone: 520-393-2714

Telephone: 520-240-3057

Telephone:

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

x

8.28.13950

August 13, 2013

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: ZS000003Q8

ACZ Project ID: L13569

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 31, 2013. This project has been assigned to ACZ's project number, L13569. 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 L13569. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after September 12, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4B

ACZ Sample ID: **L13569-01**

Date Sampled: 07/10/13 09:30

Date Received: 07/31/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	4.53			mg/L	0.5	2.5	08/06/13 18:39	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-4C

ACZ Sample ID: **L13569-02**

Date Sampled: 07/10/13 09:52

Date Received: 07/31/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	65.6			mg/L	0.5	2.5	08/06/13 18:57	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000003Q8

Sample ID: MO-2007-6A

ACZ Sample ID: **L13569-03**

Date Sampled: 07/10/13 11:23

Date Received: 07/31/13

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1	19.1			mg/L	0.5	2.5	08/06/13 19:14	jlf

Arizona license number: AZ0102


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13569**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG346168													
WG346168ICV	ICV	06/24/13 18:44	WI130624-1	50		50.2	mg/L	100.4	90	110			
WG346168ICB	ICB	06/24/13 19:01				U	mg/L		-1.5	1.5			
WG348949													
WG348949LFB1	LFB	08/06/13 16:54	WI130501-1	30		32	mg/L	106.7	90	110			
L13558-01DUP	DUP	08/06/13 17:29			1280	1320	mg/L				3.1	20	
L13558-02AS	AS	08/06/13 18:04	WI130501-1	600	1000	1560	mg/L	93.3	90	110			
WG348949LFB2	LFB	08/07/13 1:22	WI130501-1	30		32.4	mg/L	108	90	110			

FMI Gold & Copper - SierritaACZ Project ID: **L13569**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L13569**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L13569
Date Received: 07/31/2013 07:43
Received By: mtb
Date Printed: 7/31/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Relog of L13273.

Client Contact Remarks

Shipping Containers

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

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

APPENDIX C

TIME SERIES GRAPHS OF SULFATE CONCENTRATION

FIGURE C.1
SULFATE CONCENTRATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND CW-9

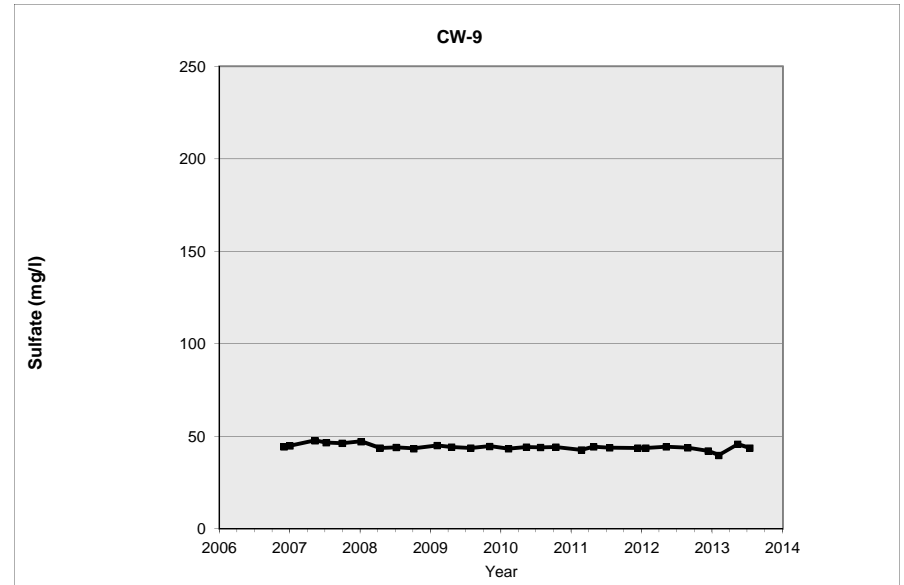
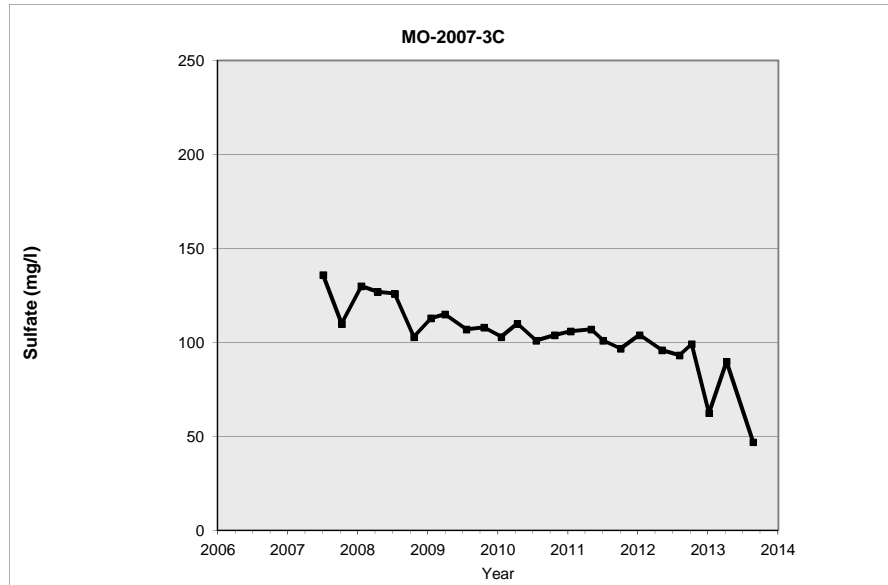
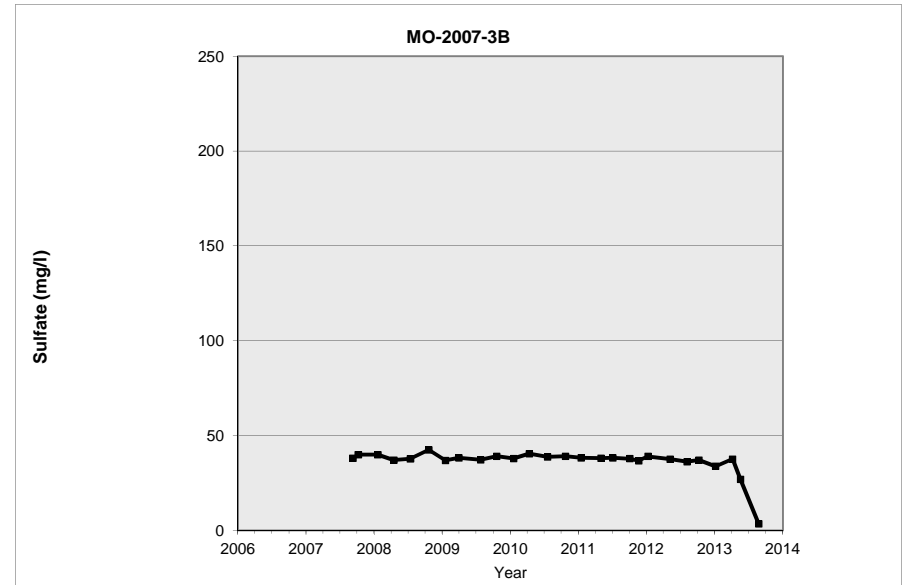
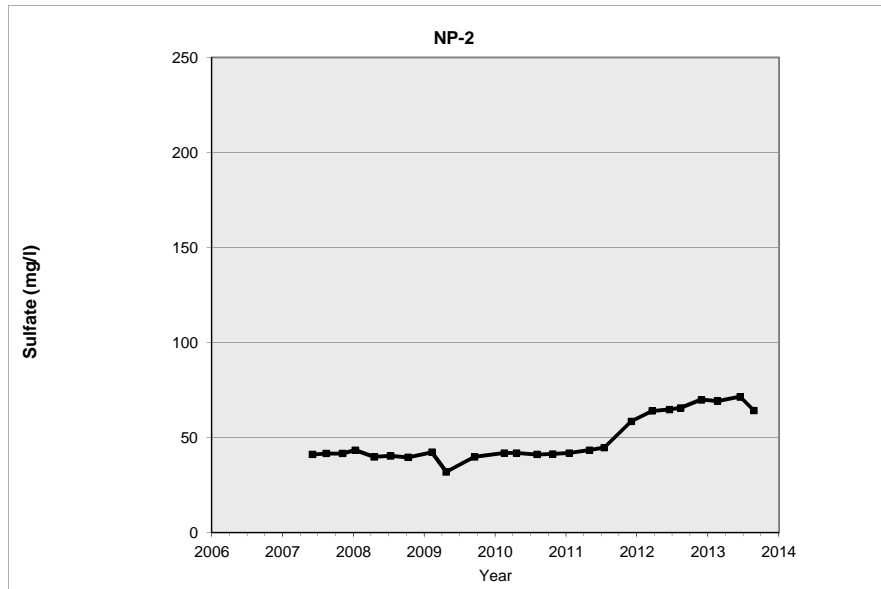


FIGURE C.2
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-4A, MO-2007-4B, MO-2007-4C, AND CW-6

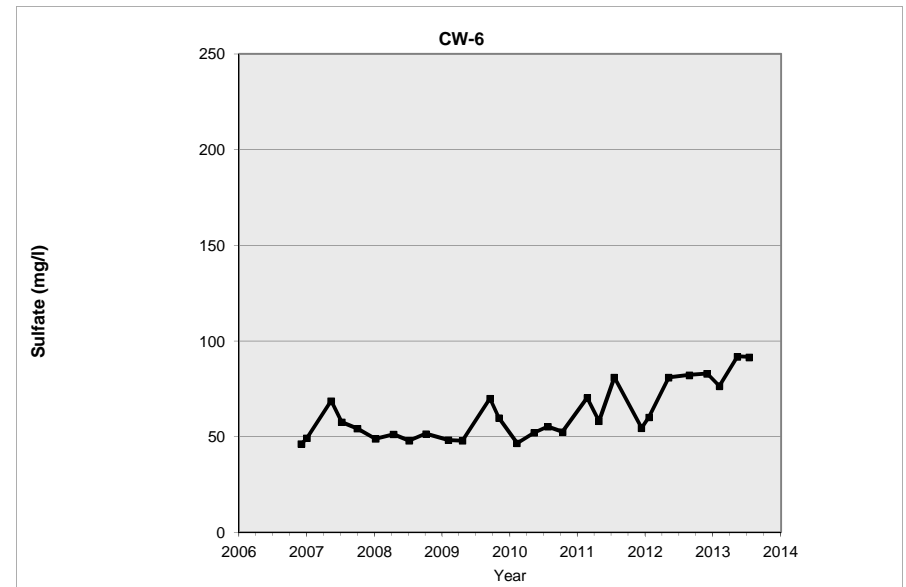
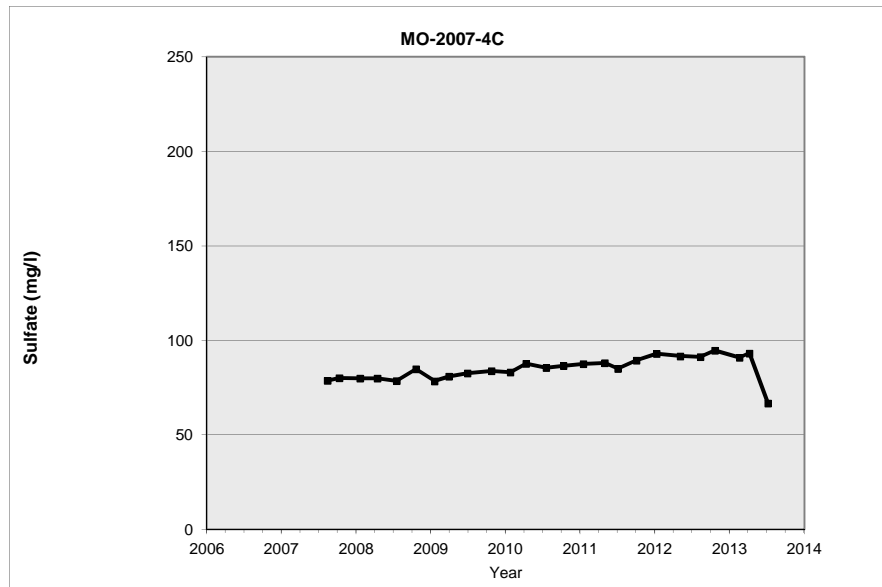
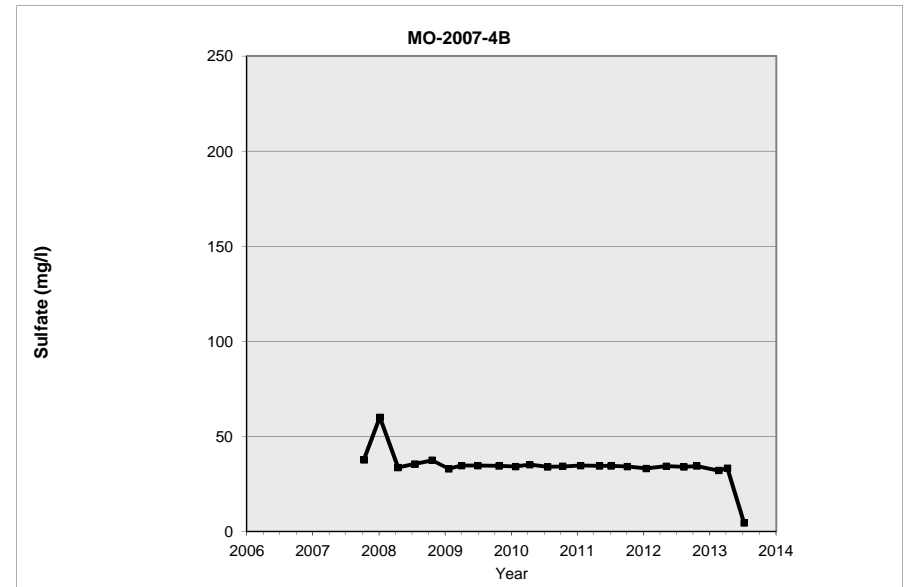
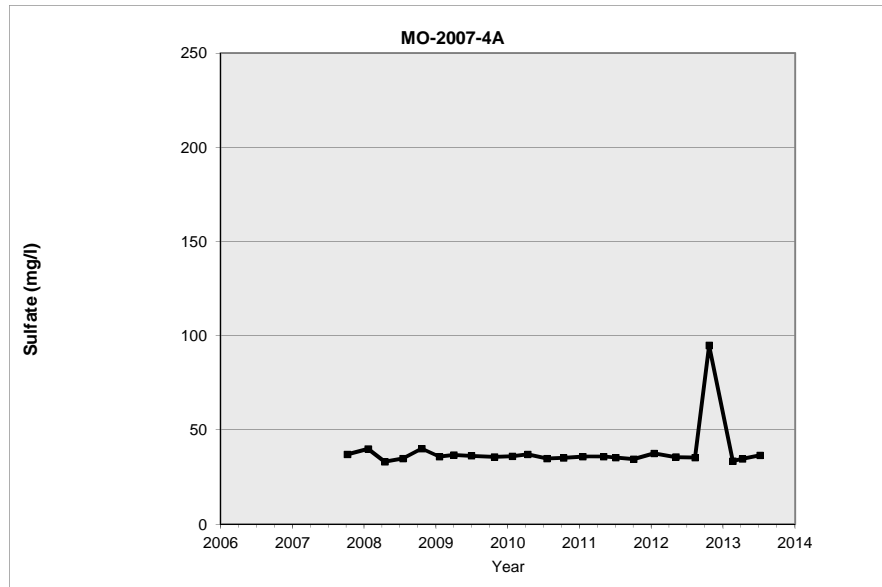


FIGURE C.3
SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2009-1 AND CW-10

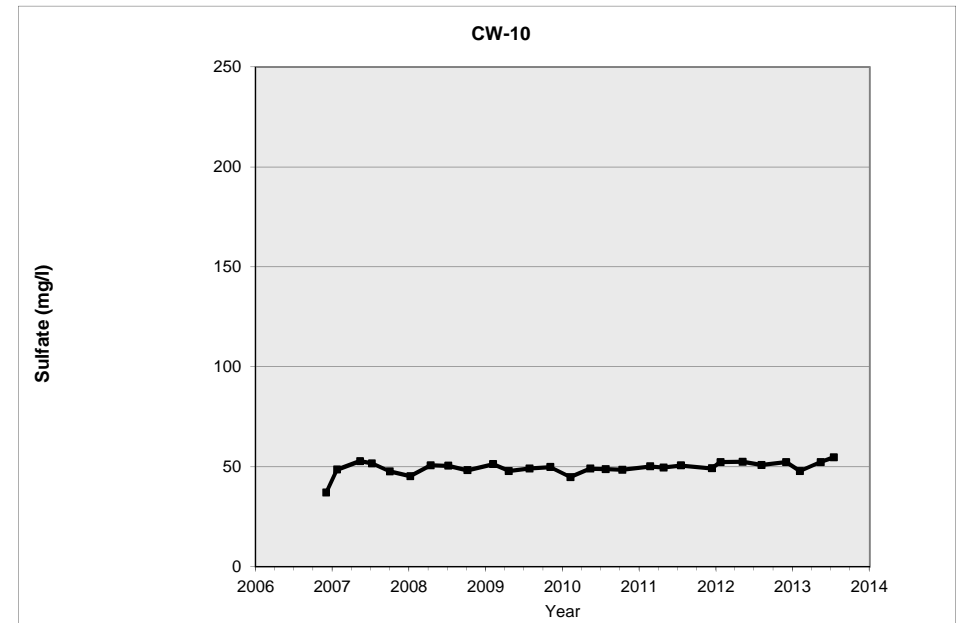
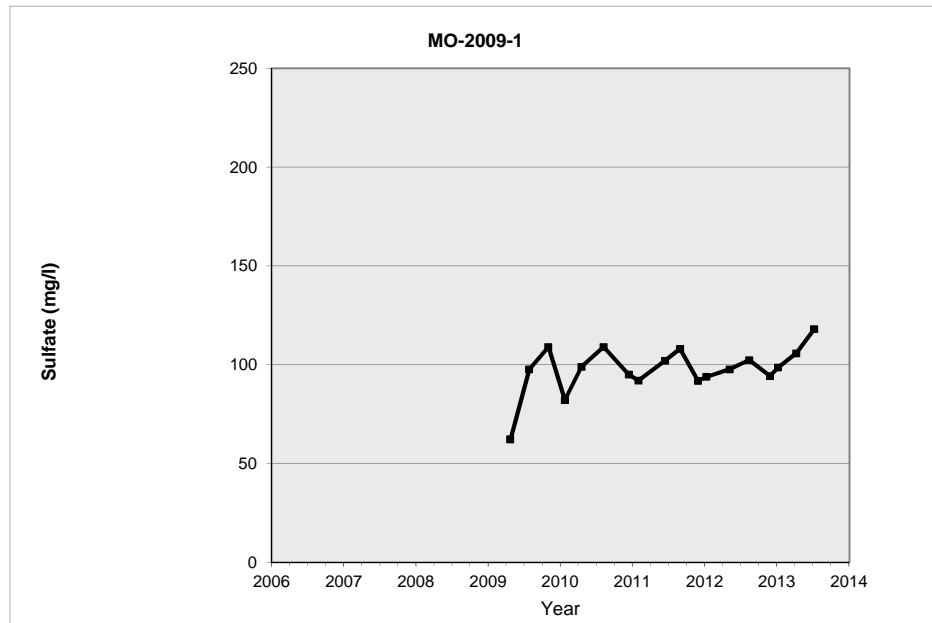


FIGURE C.4
SULFATE CONCENTRATION OVER TIME FOR WELLS
GV-01-GVDWID, GV-02-GVDWID, MO-2007-6A, AND MO-2007-6B

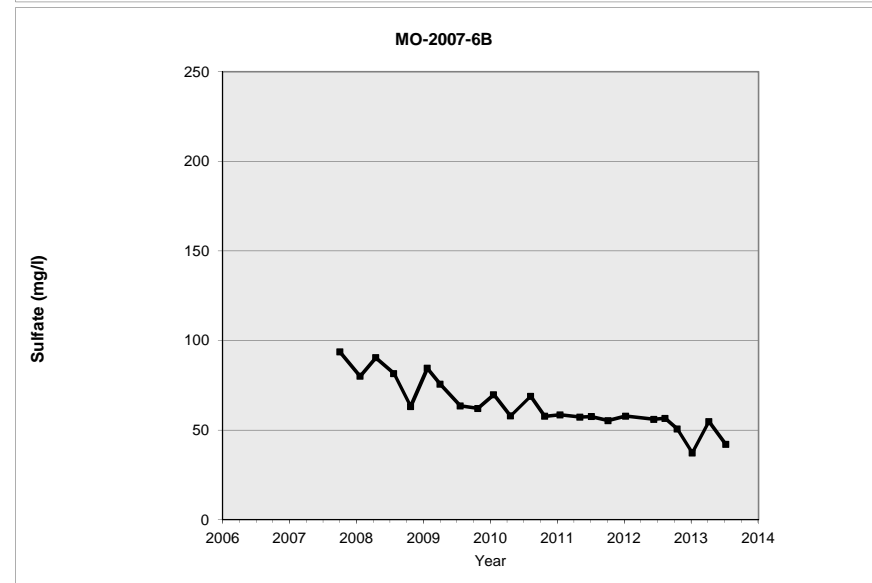
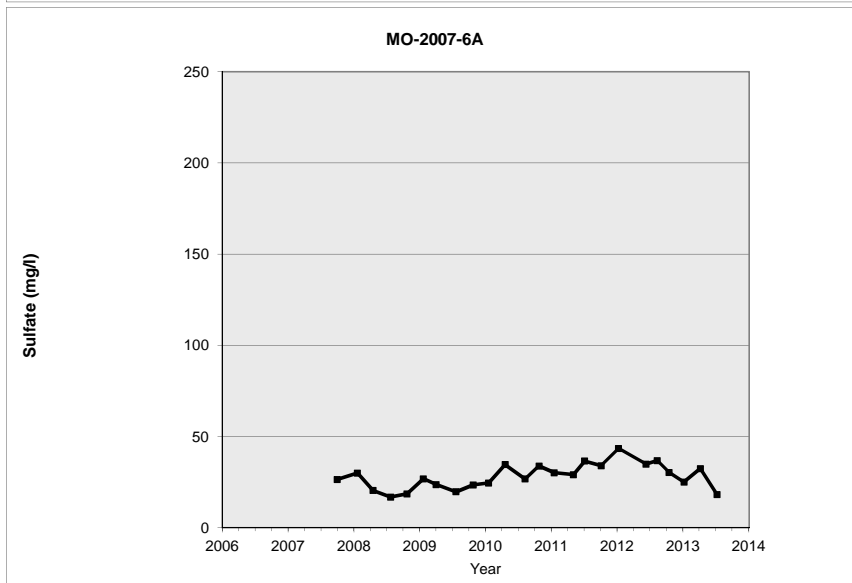
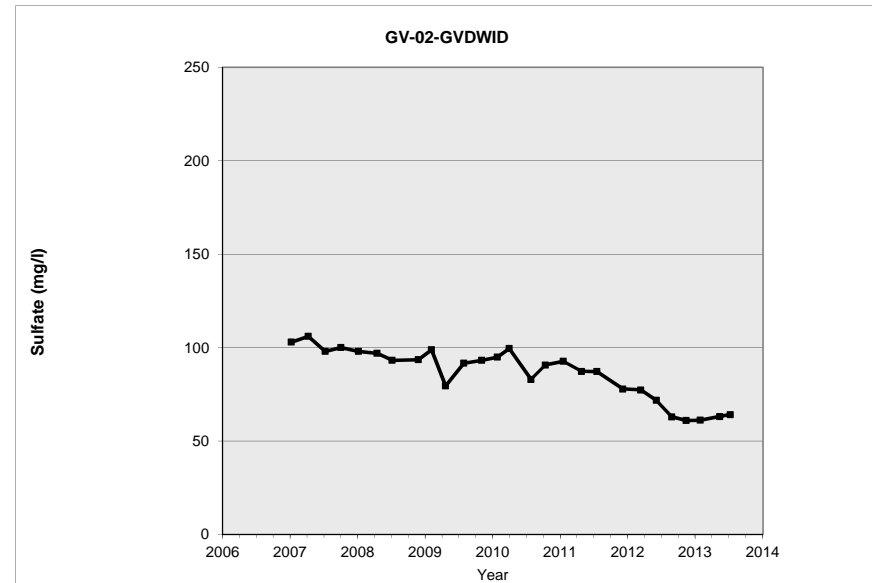
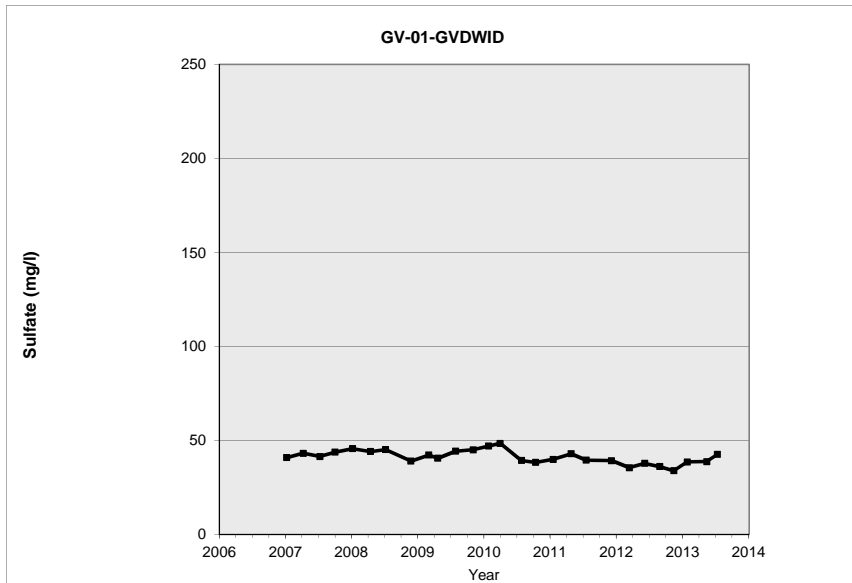


FIGURE C.5
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, AND MO-2007-1C

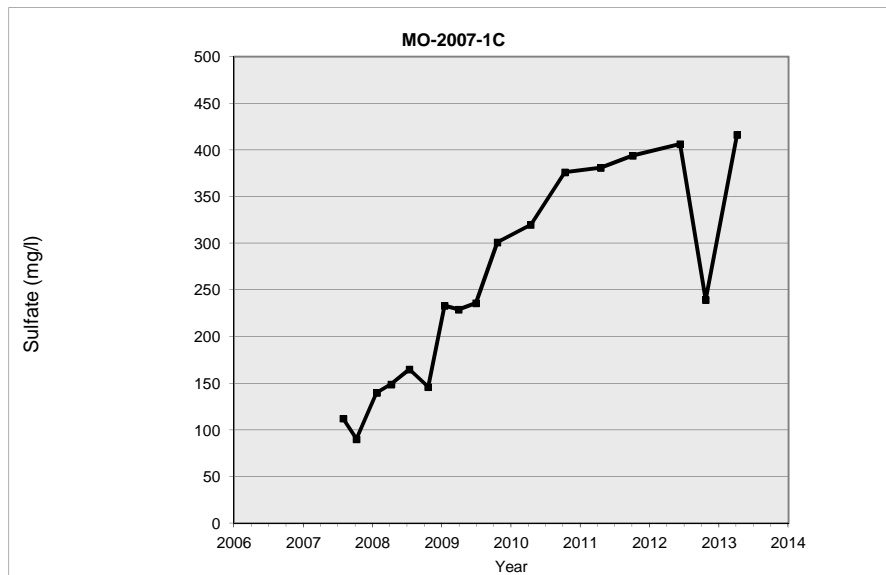
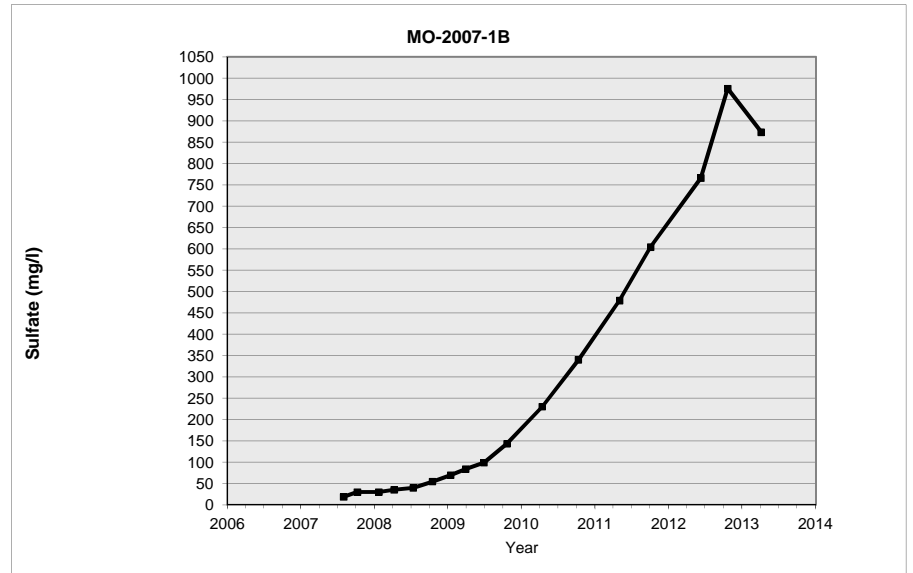
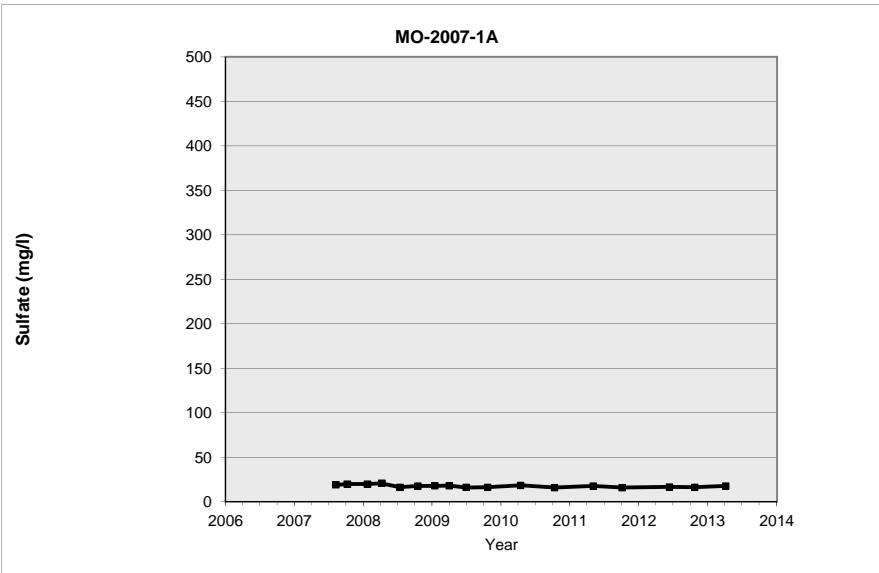
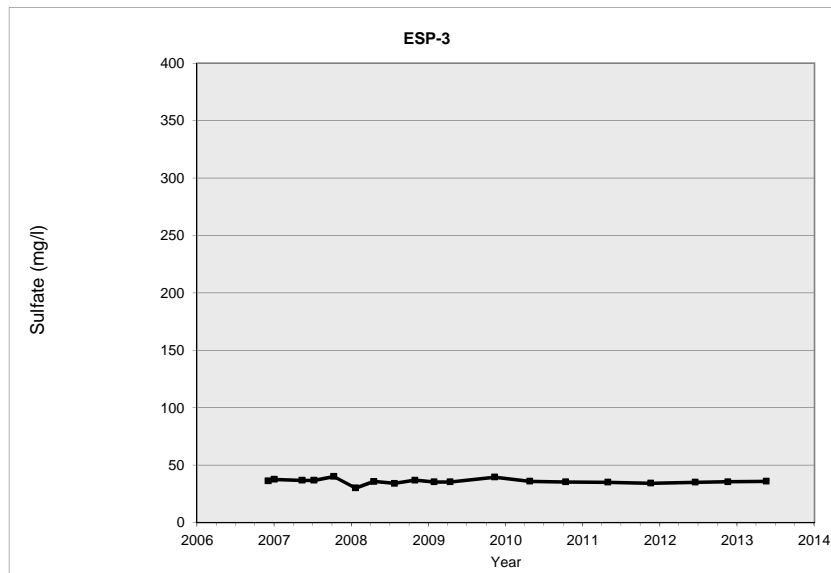
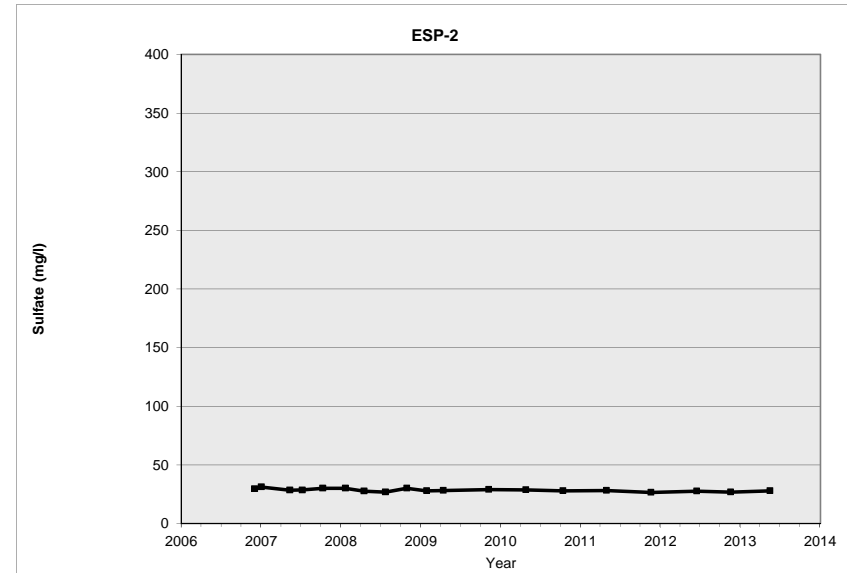
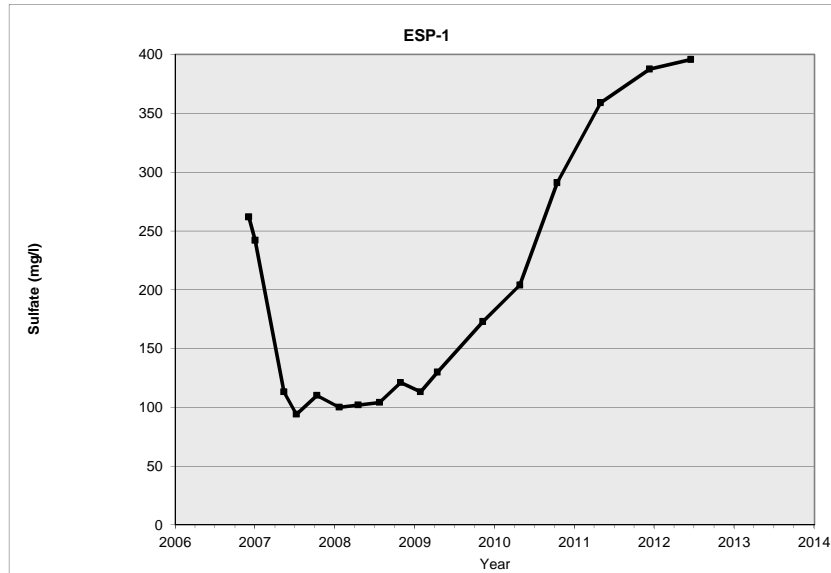
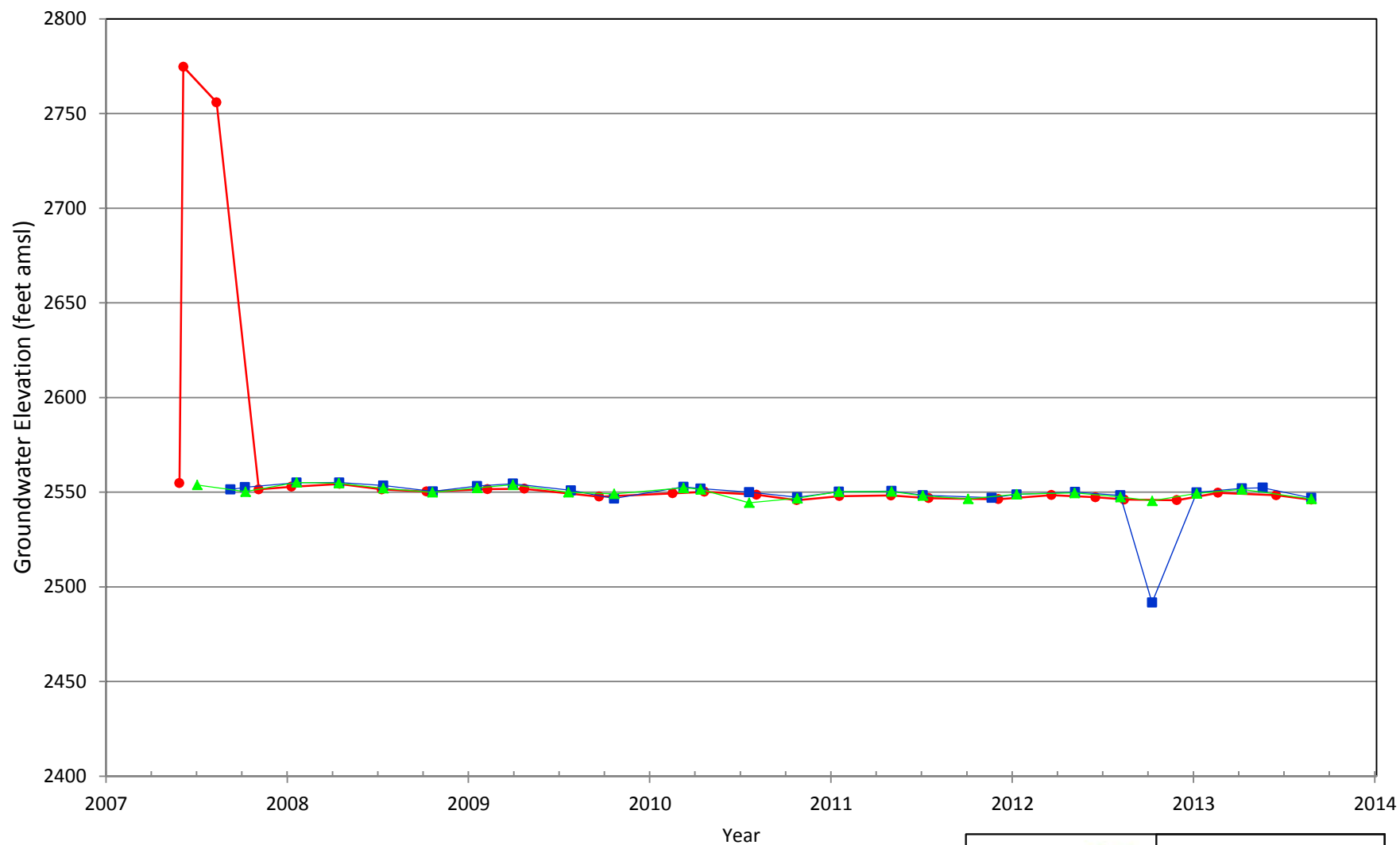


FIGURE C.6
SULFATE CONCENTRATION OVER TIME FOR WELLS
ESP-1, ESP-2, AND ESP-3



APPENDIX D

TIME SERIES GRAPHS OF GROUNDWATER ELEVATION

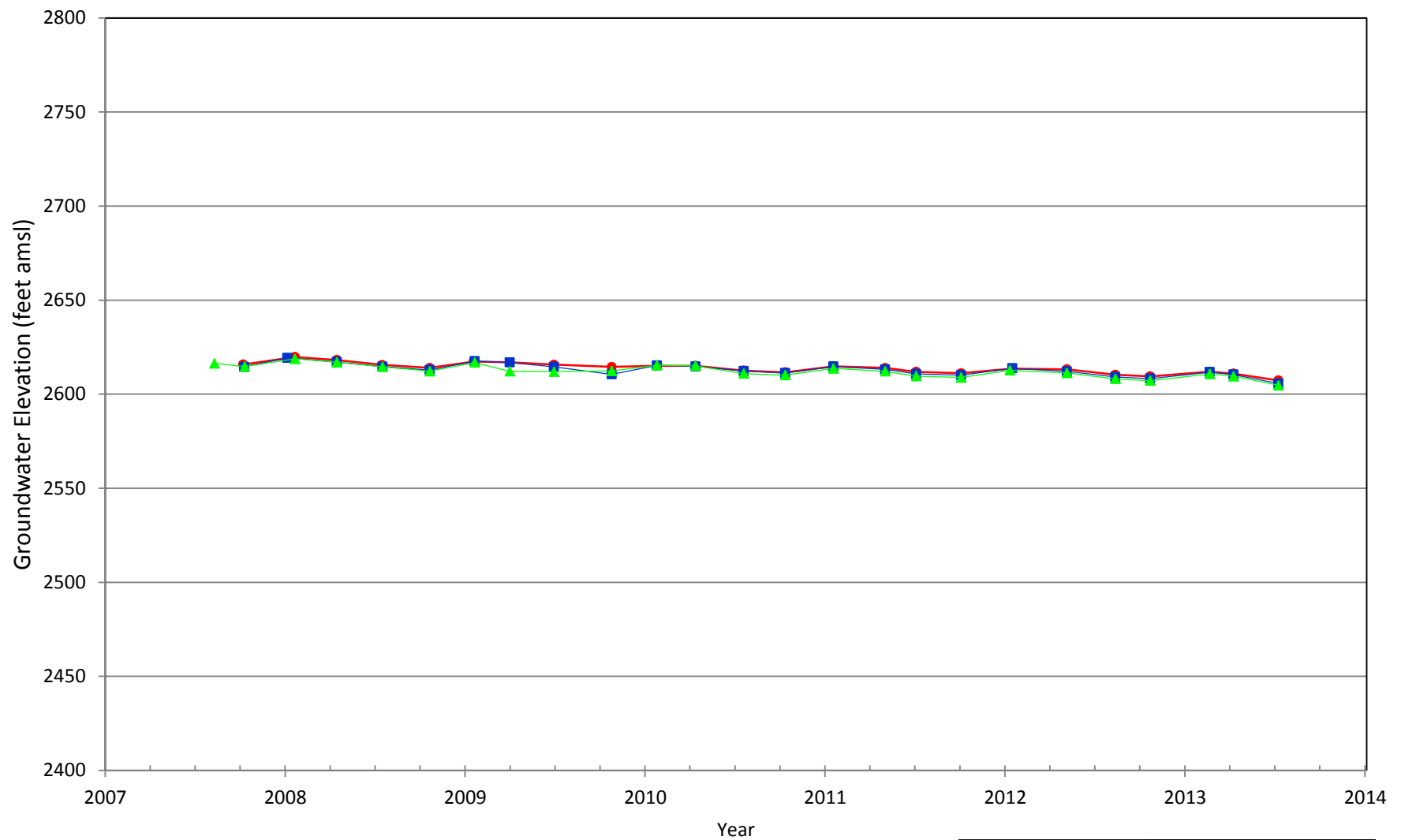


● NP-2
 ■ MO-2007-3B
 ▲ MO-2007-3C

CLEAR CREEK ASSOCIATES

Date 8/29/13

FIGURE D.1
Groundwater Elevations Over Time for Sentinel Wells NP-2, MO-2007-3B, and MO-2007-3C

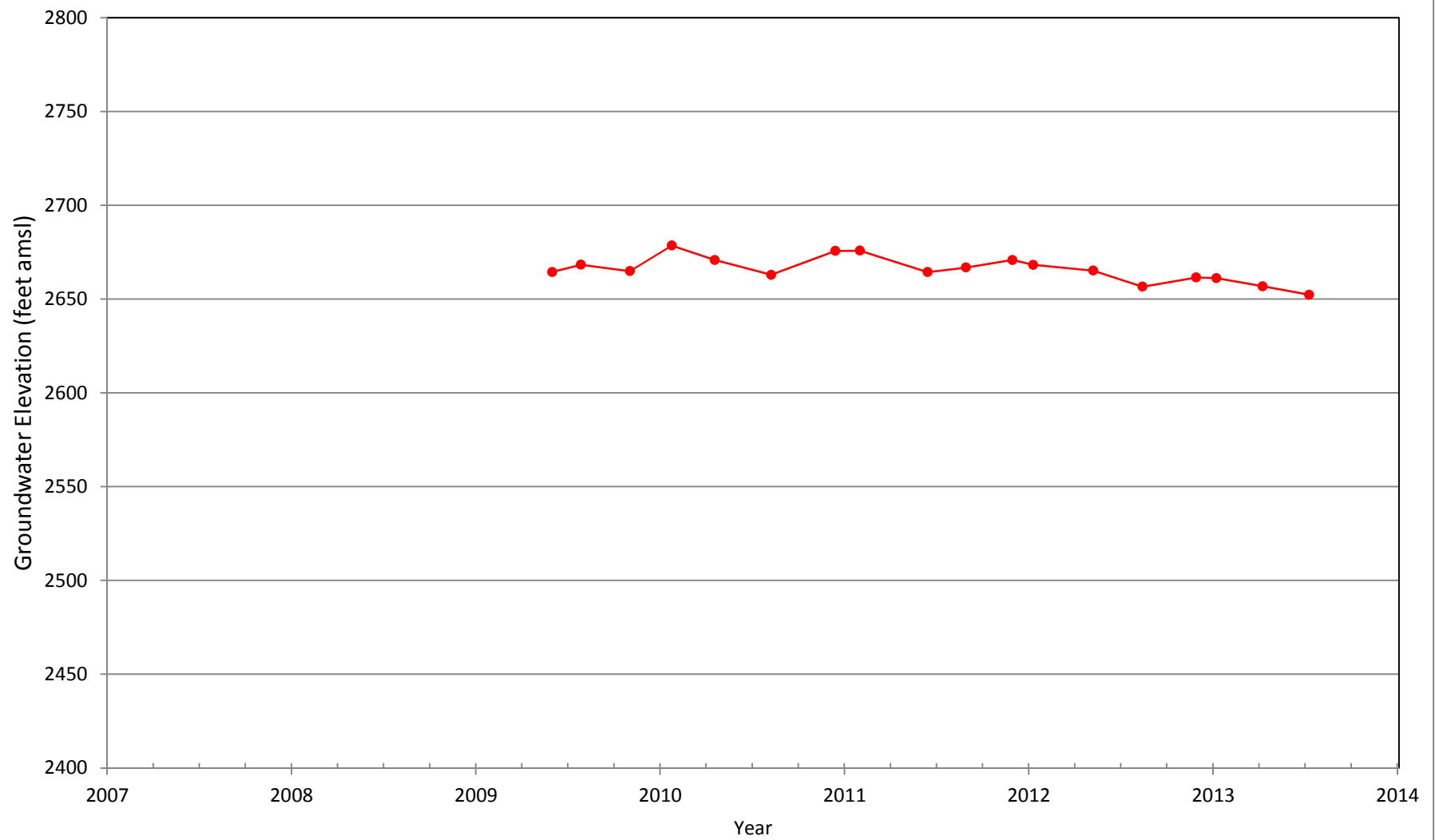


MO-2007-4A
MO-2007-4B
MO-2007-4C

**CLEAR
CREEK
ASSOCIATES**

Date 8/29/13

FIGURE D.2
Groundwater Elevations Over Time for Sentinel
Wells MO-2007-4A, MO-2007-4B, and MO-2007-4C

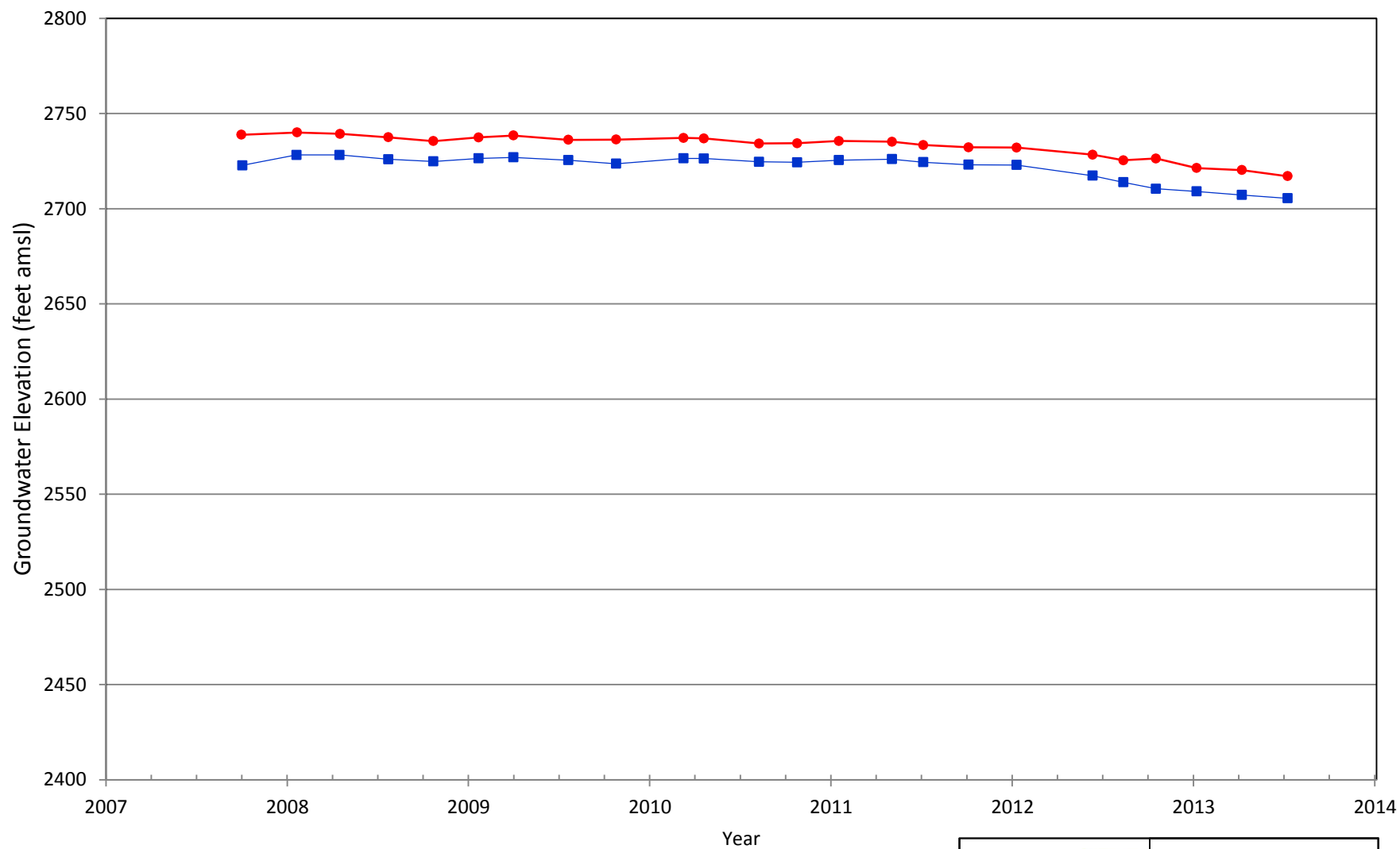


MO-2009-1

**CLEAR
CREEK
ASSOCIATES**

Date 8/29/13

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



—●— MO-2007-6A

—■— MO-2007-6B

**CLEAR
CREEK
ASSOCIATES**

Date 8/29/13

FIGURE D.4
Groundwater Elevations Over Time for Sentinel
Wells MO-2007-6A and MO-2007-6B