FREEPORT-McMoRan COPPER & GOLD

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

October 23, 2009

Hand Delivered

Ms. Cynthia S. Campbell
Arizona Department of Environmental Quality
Water Quality Compliance Section
1100 West Washington Street
Phoenix, Arizona 85007-2935

Re: Semiannual Groundwater Monitoring Report for Samples Collected During the Second and Third Quarters 2009
Mitigation Order on Consent Docket No. P-50-06

Dear Ms. Campbell:

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 2009,* prepared by Hydro Geo Chem for Freeport-McMoRan Sierrita Inc. (Sierrita). This document provides results of groundwater monitoring conducted during the second and third quarter of 2009, as agreed upon and described on letter from ADEQ to Sierrita dated April 17, 2009.

Please do not hesitate to contact me at (520) 393-4435.

Sincerely,

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

MGM:mg
Attachments
DMS tracking number:

xc: Henry Darwin, Arizona Department of Environmental Quality
John Broderick, Sierrita
Chad Fretz, Sierrita
Ned Hall, Freeport-McMoRan Copper & Gold Inc.
Stuart Brown, Bridgewater Group, Inc.
Jim Norris, Hydro Geo Chem, Inc.

SEMIANNUAL GROUNDWATER MONITORING REPORT FOR SAMPLES COLLECTED DURING THE SECOND AND THIRD QUARTERS 2009

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:

HYDRO GEO CHEM, INC.
51 West Wetmore Road, Suite 101
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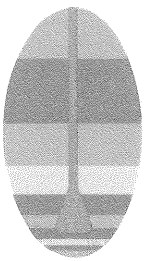
October 15, 2009



HYDRO GEO CHEM, INC.

Environmental Science & Technology

SEMIANNUAL GROUNDWATER MONITORING REPORT FOR SAMPLES COLLECTED DURING THE SECOND AND THIRD QUARTERS 2009

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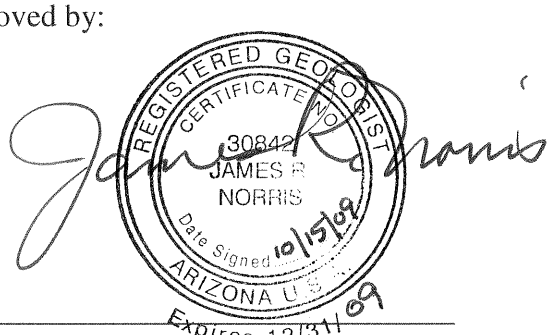

James R. Norris
Arizona Registered Geologist No. 30842

Prepared by:

Daniel R. Simpson
Senior Hydrogeologist

October 15, 2009

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted in the second and third quarters of 2009 in the vicinity of the Freeport-McMoRan Sierrita Inc. (Sierrita) Tailing Impoundment (STI). Groundwater monitoring was conducted by Sierrita to characterize groundwater sulfate concentrations and groundwater elevations in the vicinity of the STI. Hydro Geo Chem, Inc. (HGC) prepared this semiannual groundwater monitoring report 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 on the Work Plan (HGC, 2006a) submitted to and approved by Arizona Department of Environmental Quality (ADEQ). The purpose of the groundwater monitoring under the Work Plan was to document sulfate concentrations and water levels to determine the lateral and vertical extent of the sulfate plume and provide data for the development of conceptual and numerical models of the plume. Submittal of the Aquifer Characterization Report (HGC, 2009a), Feasibility Study (HGC, 2008) and Mitigation Plan (HGC, 2009c) has fulfilled the objectives of monitoring recommended by the Work Plan.

On December 23, 2008, in a letter to ADEQ (Sierrita, 2008), Sierrita recommended revising the groundwater monitoring program to match the current project status. Specifically, groundwater monitoring was recommended to track the location of the plume edge and monitor drinking water supply wells near the plume prior to implementation of the additional mitigation measures recommended in the Feasibility Study.

On January 26, 2009, ADEQ responded to Sierrita's request for a change in the groundwater monitoring schedule (ADEQ, 2009a) and, although ADEQ agreed with Sierrita's current groundwater monitoring objectives, requested additional monitoring of water levels in the aquifer to "ascertain or track trends".

On March 30, 2009, Sierrita submitted the First Quarter 2009 Groundwater Monitoring Report (HGC, 2009b). On April 17, 2009, ADEQ, after review of the First Quarter 2009 Groundwater Monitoring Report, agreed to and outlined the changes to the groundwater monitoring for sulfate. The Mitigation Plan submitted on May 8, 2009 identified the groundwater monitoring agreed to by ADEQ as "pre-implementation groundwater monitoring". The details of the pre-implementation groundwater monitoring are outlined in letters from Sierrita to ADEQ on May 15, 2009 (Sierrita, 2009a) and June 12, 2009 (Sierrita, 2009b). Wells identified for annual, quarterly, and semiannual monitoring for pre-implementation groundwater monitoring are shown in Table 1 and Figure 1. The pre-implementation groundwater monitoring is summarized below:

- Collect annual (second quarter 2009) groundwater samples and measure water levels from the 72 wells and measure water levels only at 16 wells referenced in the "First Quarter Groundwater Monitoring Report" (to the extent possible).
- Collect quarterly (third quarter 2009 and first quarter 2010) groundwater samples and measure water levels at sentinel wells NP-2, MO-2007-3B, MO-2007-3C, MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-6A, MO-2007-6B, and MO-2009-1 and drinking water supply wells CW-6, CW-9, CW-10, GV-01-GVDWID and GV-02-GVDWID.
- Collect semiannual (fourth quarter 2009) groundwater samples and measure water levels at wells: CW-3, CW-6, CW-9, CW-10, ESP-1, ESP-2, ESP-3, ESP-4, GV-01-GVDWID, GV-02-GVDWID, M-10, M-8, MH-28, MH-29, MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-3B, MO-2007-3C, MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-5B, MO-2007-5C, MO-2007-6A, MO-2007-6B, MO-2009-1, NP-2 and TMM-1.
- Analyze filtered groundwater samples for dissolved sulfate following United States Environmental Protection Agency (EPA) Method 300.0, eliminating the monitoring for total sulfate.
- Submit groundwater monitoring reports to ADEQ on the last day of the month in April and October unless Sierrita detects sulfate levels above 135 milligrams per liter (mg/L) in one of the sentinel wells. In that event, Sierrita will notify ADEQ immediately in writing and increase the sampling frequency to monthly. After a total of five samples are collected from the sentinel well, conduct a trend analysis on sulfate concentrations and recommend a continued sampling frequency.

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.

During March and April 2009 an additional offsite well was installed, developed, and water level and water quality samples collected. Well MO-2009-1 was installed between MO-2007-5 and CW-10 to determine the eastern edge of the plume in that area and act as a sentinel well for CW-10. On May 19, 2009, AMEC Infrastructure, Inc. conducted a measuring point elevation survey for newly installed well MO-2009-1. A copy of the survey report is included as Appendix A.

2. GROUNDWATER MONITORING

2.1 Monitoring Results

Analytical results and groundwater elevation data for the second and third quarters of 2009 are tabulated in Table 2 and Table 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the second quarter 2009. The highest sulfate concentration measured at co-located wells was used for concentration contouring. 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 2009. Groundwater elevations in the second quarter 2009 are presented on Figure 4. Groundwater elevations were calculated using the depth to water measurements made under static (non-pumping) conditions for all wells shown. Water level data for the IW-series wells, HAVEN GOLF, and GV-01-GVDWID, GV-02-GVDWID, and GV-SI-GVDWID were not used to estimate groundwater elevation contours for Figure 4 because the depth to water was measured while the wells were pumping.

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 of 2009, and is included as Appendix B. Analytical laboratory reports for samples collected in the second and third quarters of 2009 are provided in portable document format on the compact diskette in Appendix C. As determined by the analytical data verification review, all data for samples collected in the second and third quarters of 2009 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 of 2009. As presented in Table 1, groundwater samples were collected from 73 plume area wells and depth to water measurements were collected at 84 wells during the second quarter 2009. In the third quarter 2009 groundwater samples and depth to water measurements were collected from 17 plume area wells as outlined in the pre-implementation groundwater monitoring plan.

- Sulfate concentration data indicate that the sulfate plume from the STI (as defined by the 250 mg/L sulfate concentration contour) extends northeast from the southeastern corner of the tailing impoundment to the vicinity of co-located wells CW-3/MO-2007-5. The plume then extends north from wells CW-3/MO-2007-5 to the west of wells NP-2/MO-2007-3 and to Duval Mine Road, just south of the MO-2007-1 wells (Figure 2). Comparison of the second and third quarters 2009 sulfate concentration data with those collected in previous quarters indicates no significant change in the plume geometry.

- Groundwater elevations decrease from west to east in the immediate vicinity of STI and from south to north across the central portion of the study area near Green Valley. Comparison of the second quarter 2009 water elevations with those observed in the first quarter 2009 indicates about a 2.30 foot decrease in the average elevation and only minor differences in the apparent groundwater flow directions. The overall pattern of groundwater flow indicated by groundwater elevations is consistent with expected regional groundwater flow patterns in the southern portion of the Tucson groundwater basin (PAG, 1983a and 1983b).

- Water elevations in co-located wells screened at different depths vary by less than four feet in the north part of the study area. In the south half of the study area, the deepest screened intervals at co-located wells MH-13, MO-2007-4, MO-2007-5, and MO-2007-6 have lower water elevations than the more shallow wells. The vertical water level differences between the shallowest and deepest screened intervals at MH-13, MO-2007-4, MO-2007-5, and MO-2007-6 range from 4.78 to 12.59 feet.

- Well MO-2009-1 was installed to further define the extent of the southeast portion of the sulfate plume. The results of groundwater sampling conducted at MO-2009-1 during April and July 2009 reported sulfate concentrations of 62.1 and 97.7 mg/L, respectively. Because the sulfate concentrations at MO-2009-1 are below the mitigation level of 250 mg/L, MO-2009-1 has defined the southeastern boundary of the sulfate plume and serves as a sentinel well of eastward plume migration.

- Sulfate concentrations reported for groundwater samples collected from sentinel wells NP-2, MO-2007-3B, MO-2007-3C, MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-6A, MO-2007-6B, and MO-2009-1 are below 135 mg/L which is the trigger level for more frequent monitoring at sentinel wells (Sierrita, 2009a).

- Time series graphs of sulfate concentration for the Esperanza (ESP), Community Water Company (CW), Green Valley Domestic Water Improvement District (GVDWID), and Mitigation Order (MO) wells in the vicinity of the edge of the plume are presented in Appendix D. Inspection of the time series graphs indicates that sulfate concentrations in water supply wells CW-6, CW-9, CW-10, GV-01-GVDWID, and GV-02-GVDWID are steady over time and less than the interim action trigger level of 135 mg/L (HGC, 2006b). Sulfate concentrations appear to increase in ESP-1, MO-2007-1B, and MO-2007-1C and decrease in MO-2007-3C and MO-2007-6B. The largest percentage increases occur in MO-2007-1B and MO-2007-1C at the leading edge of the sulfate plume. Sulfate concentrations at these wells are expected to increase until the mitigation measures identified by the Feasibility Study and Mitigation Plan are implemented. There are insufficient measurements to determine a trend at MO-2009-1.

4. REFERENCES

Arizona Department of Environmental Quality (ADEQ). 2006. Letter from Robert Casey to John Brack Regarding Mitigation Order on Consent, Docket P-50-06, Work Plan Response. September 22, 2006.

ADEQ. 2009a. Letter from Cynthia Campbell (ADEQ) to Ned Hall (Sierrita) Regarding Mitigation Order on Consent, Docket P-50-06, Recommended Groundwater Monitoring for Sulfate, Your Letter Dated December 23, 2008. January 26, 2009.

ADEQ. 2009b. Letter from Cynthia Campbell (ADEQ) to Ned Hall (Sierrita) Regarding Mitigation Order on Consent, Docket P-50-06, Groundwater Monitoring for Sulfate. April 17, 2009.

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. First Quarter 2009 Groundwater Monitoring Report, Task 2.2 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-50-06. Pima County, Arizona. March 26, 2009.

HGC. 2009c. 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.

Mason, Dale E. and Bata Liciniu. 2006. Regional Groundwater Flow Model of the Tucson Active Management Area; Tucson, Arizona. Simulation and Application Modeling Report No. 13. Arizona Department of Water Resources.

Phelps Dodge Sierrita, Inc. 2005. Quality Assurance/Quality Control Plan for Water Monitoring, Phelps Dodge Sierrita, Inc. June 2005.

Pima Association of Governments (PAG). 1983a. Region Wide Groundwater Quality in the Upper Santa Cruz Basin Mines Task Force Area. September 1983.

PAG. 1983b. Ground-Water Monitoring in the Tucson Copper Mining District. September 1983.

Sierrita. 2008. Letter from Ned Hall (Sierrita) Regarding Mitigation Order on Consent, Docket P-50-06, Recommended Groundwater Monitoring for Sulfate. December 23, 2008.

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 the First Year of Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter 2009	Quarterly Sampling Third Quarter 2009	Semiannual Sampling Fourth Quarter 2009	Quarterly Sampling First Quarter 2010
1350	ND	TBPI	WLO			
CC OF GV	501760	CC of GV	✓			
CW-10	207982	CWC	✓	✓	✓	✓
CW-3	627483	CWC	✓		✓	
CW-6	627485	CWC	✓	✓	✓	✓
CW-7	502546	CWC	WLO			
CW-8	543600	CWC	WLO			
CW-9	588121	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-5	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	✓			

TABLE 1
Sampling Schedule for the First Year of Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter 2009	Quarterly Sampling Third Quarter 2009	Semiannual Sampling Fourth Quarter 2009	Quarterly Sampling First Quarter 2010
IW-17	545560	Sierrita	✓			
IW-18	545561	Sierrita	✓			
IW-19	545562	Sierrita	✓			
IW-20	545563	Sierrita	✓			
IW-21	545564	Sierrita	✓			
IW-22	200554	Sierrita	✓			
IW-23	200555	Sierrita	✓			
IW-24	200556	Sierrita	✓			
M-8	87390	TBPI	✓		✓	
M-9	501652	TBPI	✓			
M-10	501653	TBPI	✓		✓	
M-20	906595	TBPI	✓			
MH-1	803629	Sierrita	WLO			
MH-3	803630	Sierrita	WLO			
MH-5	803632	Sierrita	WLO			
MH-6	803633	Sierrita	WLO			
MH-7	803634	Sierrita	WLO			
MH-9	803635	Sierrita	WLO			
MH-10	803636	Sierrita	✓			
MH-11	803637	Sierrita	✓			
MH-13A	904071	Sierrita	✓			
MH-13B	904072	Sierrita	✓			
MH-13C	904073	Sierrita	✓			
MH-14	528098	Sierrita	WLO			
MH-15E	528094	Sierrita	WLO			
MH-15W	528093	Sierrita	WLO			
MH-16E	528100	Sierrita	WLO			
MH-16W	528099	Sierrita	WLO			
MH-24	563799	Sierrita	WLO			
MH-25A	201528	Sierrita	✓			
MH-25B	208429	Sierrita	✓			
MH-25C	208426	Sierrita	✓			
MH-26A	201527	Sierrita	✓			
MH-26B	208427	Sierrita	✓			

TABLE 1
Sampling Schedule for the First Year of Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter 2009	Quarterly Sampling Third Quarter 2009	Semiannual Sampling Fourth Quarter 2009	Quarterly Sampling First Quarter 2010
MH-26C	208428	Sierrita	✓			
MH-28	903648	Sierrita	✓		✓	
MH-29	903649	Sierrita	✓		✓	
MH-30	903884	Sierrita	✓			
MO-2007-1A	907342	Sierrita	✓		✓	
MO-2007-1B	907210	Sierrita	✓		✓	
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	✓		✓	

Notes:

ADWR = Arizona Department of Water Resources
CC OF GV = Country Club of Green Valley
CWC = Community Water Company of Green Valley
GVDWID = Green Valley Domestic Water Improvement District
ND = No Data
Sierrita = Freeport-McMoRan Sierrita Inc.
TBPI = Twin Buttes Properties, Inc.
WLO = Water Level Only

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

TABLE 2
Analytical Results for Second and Third Quarters 2009 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	04/21/09	6.92	19.8	526	90.1
CW-3	627483	04/24/09	6.75	25.4	520	56.2
CW-6	627485	04/22/09	7.62	25.3	377	47.9
CW-6 DUP	627485	04/22/09	7.62	25.3	377	47.3
CW-6	627485	09/17/09	7.18	24.8	478	70
CW-9	588121	04/22/09	7.81	26.3	361	44.3
CW-9	588121	07/30/09	7.57	28.3	379	43.8
CW-10	207982	04/22/09	7.71	29.2	349	47.9
CW-10	207982	07/30/09	7.60	31.5	375	49.2
CW-10 DUP	207982	07/30/09	7.60	31.5	375	49.4
ESP-1	623102	04/16/09	7.72	25.4	541	130
ESP-2	623103	04/16/09	7.55	24.0	307	28.2
ESP-3	623104	04/16/09	7.62	26.1	327	35.3
ESP-4	623105	04/16/09	7.30	25.4	873	521
GV-01-GVDWID	603428	04/22/09	7.05	27.8	380	40.6
GV-01-GVDWID	603428	07/29/09	7.17	24.6	606	44.3
GV-02-GVDWID	603429	04/22/09	6.67	26.5	485	79.5
GV-02-GVDWID	603429	07/29/09	7.02	26.4	427	91.6
GV-SI-GVDWID	208825	04/22/09	6.95	28.0	330	5.6
HAVEN GOLF	515867	04/21/09	7.40	23.6	306	109
I-10	608525	05/12/09	7.15	28.0	997	495
IW-1	623129	04/20/09	7.01	29.0	1092	670
IW-2A	216464	04/20/09	6.85	28.0	405	54
IW-3A	623131	04/20/09	6.69	27.2	1448	1400
IW-4	623132	04/20/09	6.79	25.6	1604	1400
IW-5	623133	04/20/09	6.73	24.7	1635	1600
IW-6A	545565	04/20/09	6.78	25.6	1710	1700
IW-8	508236	04/20/09	6.75	25.4	1620	1700
IW-9	508238	04/20/09	6.79	26.9	1585	1600
IW-10	508237	04/20/09	6.80	24.8	1607	1600
IW-11	508235	04/20/09	6.64	25.1	1632	1600
IW-12	545555	04/20/09	6.63	26.5	1576	1500
IW-13	545556	04/20/09	6.73	27.2	1697	1700
IW-14	545557	04/20/09	6.66	27.1	1612	1700
IW-15	545558	04/20/09	7.71	28.5	1302	1600
IW-15 DUP	545558	04/20/09	7.71	28.5	1302	1700
IW-16	545559	04/20/09	6.69	27.1	1347	1700
IW-17	545560	04/20/09	6.77	30.1	1332	1600

TABLE 2
Analytical Results for Second and Third Quarters 2009 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, dissolved (mg/L)
IW-18	545561	04/20/09	6.77	29.9	1337	1700
IW-19	545562	04/20/09	6.82	27.9	1366	1600
IW-20	545563	04/20/09	6.76	30.0	1375	1500
IW-21	545564	04/20/09	6.83	30.7	1422	1600
IW-22	200554	04/20/09	6.77	25.5	1635	1700
IW-23	200555	04/20/09	6.82	25.4	1607	1700
IW-24	200556	04/20/09	6.79	25.6	1604	1600
IW-24 DUP	200556	04/20/09	6.79	25.6	1604	1500
M-8	087390	05/12/09	7.62	26.8	387	29.6
M-9	501652	05/13/09	7.54	27.3	487	80.2
M-9	501652	07/14/09	7.60	27.0	420	81.7
M-10	501653	05/12/09	7.77	26.9	487	97
M-10	501653	07/14/09	7.20	25.0	420	96
M-20	906595	05/12/09	6.88	28.0	1501	1580
MH-10	803636	04/14/09	6.62	28.1	1260	1260
MH-11	803637	05/13/09	6.62	31.0	1569	1500
MH-13A	904071	04/15/09	7.12	25.6	1643	1650
MH-13B	904072	04/15/09	7.50	25.4	1370	1030
MH-13B DUP	904072	04/15/09	7.50	25.4	1370	1100
MH-13C	904073	04/15/09	8.79	25.9	421	42
MH-25A	201528	04/15/09	7.81	25.1	350	4
MH-25B	208429	04/15/09	7.25	25.2	1483	1600
MH-25C	208426	04/15/09	7.28	26.6	1368	1270
MH-26A	201527	04/21/09	7.57	26.3	322	10
MH-26B	208427	04/21/09	6.85	28.8	1238	1520
MH-26C	208428	04/21/09	7.49	29.6	1034	660
MH-28	903548	04/07/09	6.84	26.4	6300	1860
MH-29	903649	04/07/09	6.80	26.4	7700	1720
MH-29 DUP	903649	04/07/09	6.80	26.4	7700	1700
MH-30	903884	04/07/09	6.81	29.5	3400	1790
MH-30 DUP	903884	04/07/09	6.81	29.5	3400	1800
MO-2007-1A	907342	04/01/09	7.55	26.5	387	18.2
MO-2007-1A	907342	07/01/09	7.64	28.5	361	16.3
MO-2007-1B	907210	04/01/09	7.78	26.4	511	84.1
MO-2007-1B	907210	07/01/09	7.57	30.1	527	99

TABLE 2
Analytical Results for Second and Third Quarters 2009 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, dissolved (mg/L)
MO-2007-1C	907209	04/01/09	7.66	27.1	700	229
MO-2007-1C	907209	07/01/09	7.33	30.8	367	236
MO-2007-1C DUP	907209	07/01/09	7.33	30.8	367	227
MO-2007-2	906765	04/01/09	7.34	28.5	922	458
MO-2007-3B	906816	04/01/09	7.89	25.7	376	38.2
MO-2007-3B	906816	07/27/09	7.78	28.2	353	37.2
MO-2007-3C	906817	04/01/09	8.09	28.3	541	115
MO-2007-3C	906817	07/22/09	8.07	31.4	510	107
MO-2007-4A	907213	04/02/09	7.85	26.8	393	36.7
MO-2007-4A DUP	907213	04/02/09	7.85	26.8	393	36.5
MO-2007-4A	907213	07/01/09	7.55	26.4	395	36.3
MO-2007-4B	907212	04/02/09	7.93	28.3	363	34.6
MO-2007-4B	907212	07/01/09	7.64	27.8	370	34.7
MO-2007-4C	907211	04/02/09	8.48	30.3	444	81
MO-2007-4C	907211	07/01/09	8.25	31.1	446	82.7
MO-2007-5B	907456	04/02/09	8.15	30.6	958	366
MO-2007-5C	907457	05/13/09	7.64	31.4	715	235
MO-2007-6A	907607	04/02/09	7.88	25.5	378	23.7
MO-2007-6A	907607	07/22/09	7.47	29.5	373	19.8
MO-2007-6B	907606	04/02/09	8.08	27.7	444	75.7
MO-2007-6B	907606	07/22/09	7.86	32.7	427	63.5
MO-2009-1	910458	04/24/09	7.23	31.3	397	62.1
MO-2009-1	910458	07/29/09	8.18	32.9	495	97.7
MO-2009-1 DUP	910458	07/29/09	8.18	32.9	495	96.4
NP-2	605898	04/24/09	6.89	24.6	510	32.1
NP-2	605898	09/17/09	6.68	26.6	414	40
PZ-7	561870	04/06/09	6.90	24.2	1100	460
PZ-8	561866	04/08/09	6.54	24.1	900	280
TMM-1	616156	04/21/09	7.92	26.7	281	5.5

Notes:

SU = Standard Units
µS/cm = microsiemens per centimeter
deg C = degrees Celsius
NA = Not Analyzed
mg/L = milligrams per Liter
DUP = Duplicate sample

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2009

Well Name	ADWR 55 Registry No.	Survey Source	UTM East	UTM North	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
CC OF GV	501760	HGC	501635.382	3527876.220	2823.45	04/21/09	258.79	2564.66
CW-3	627483	HGC	500047.663	3523809.985	2941.71	04/24/09	269.06	2672.65
CW-6	627485	CWC	500891.072	3525794.239	2867.00	04/22/09	253.15	2613.85
CW-6	627485	CWC	500891.072	3525794.239	2867.00	09/22/09	256.80	2610.20
CW-7	502546	CWC	499659.842	3528094.155	2987.50	04/22/09	424.30	2563.20
CW-8	543600	CWC	499798.520	3525661.191	2957.50	04/22/09	341.20	2616.30
CW-9	588121	CWC	501072.040	3528740.784	2834.30	04/22/09	311.10	2523.20
CW-9	588121	CWC	501072.040	3528740.784	2834.30	07/30/09	316.5	2517.80
CW-10	207982	CWC	500913.364	3523455.502	2868.50	04/22/09	191.12	2677.38
CW-10	207982	CWC	500913.364	3523455.502	2868.50	07/30/09	197.3	2671.20
ESP-1	623102	Sierrita	499969.682	3526448.677	2954.27	04/16/09	350.50	2603.77
ESP-2	623103	Sierrita	500241.637	3526924.656	2934.60	04/16/09	341.45	2593.15
ESP-3	623104	Sierrita	500234.067	3527377.239	2935.18	04/16/09	353.20	2581.98
ESP-4	623105	Sierrita	499916.830	3526132.758	2958.60	04/16/09	356.87	2601.73
ESP-5	623106	Sierrita	502007.895	3527082.232	2820.00	06/02/09	224.10	2595.90
GV-01-GVDWID	603428	GVDWID	499812.869	3522254.157	2942.35	07/29/09	201.9	2740.45
GV-02-GVDWID	603429	GVDWID	499786.207	3521654.457	2930.47	07/29/09	231.9	2698.57
I-10	608525	TBPI	497797.957	3528469.536	3210.58	05/12/09	660.80	2549.78
IW-1	623129	Sierrita	496905.892	3521277.779	3144.69	05/13/09	370.50	2774.19
IW-2A	216464	Sierrita	497469.228	3521337.953	3112.28	05/13/09	358.80	2753.48
IW-4	623132	Sierrita	497371.700	3522465.879	3137.06	05/13/09	383.20	2753.86
IW-5	623133	Sierrita	497369.528	3522814.850	3137.65	05/13/09	375.90	2761.75
IW-6A	545565	Sierrita	497381.226	3523708.756	3132.26	05/13/09	387.30	2744.96
IW-8	508236	Sierrita	497368.253	3522020.520	3122.19	05/13/09	377.80	2744.39
IW-9	508238	Sierrita	497369.791	3522207.639	3102.94	05/13/09	357.20	2745.74
IW-10	508237	Sierrita	497370.367	3523122.199	3129.64	05/13/09	391.20	2738.44
IW-11	508235	Sierrita	497371.414	3523428.954	3127.20	05/13/09	379.70	2747.50
IW-12	803638	Sierrita	497364.911	3523969.869	3138.18	05/13/09	375.80	2762.38
IW-13	545556	Sierrita	497363.820	3524166.673	3143.35	05/13/09	388.90	2754.45
IW-14	545557	Sierrita	497367.126	3524373.122	3146.42	05/13/09	383.30	2763.12
IW-15	545558	Sierrita	497372.873	3524567.261	3152.02	05/13/09	388.00	2764.02
IW-16	545559	Sierrita	497370.651	3524782.868	3162.85	05/13/09	402.00	2760.85
IW-17	545560	Sierrita	497373.717	3525002.869	3160.76	05/13/09	425.00	2735.76
IW-18	545561	Sierrita	497374.056	3525169.771	3171.15	05/13/09	441.50	2729.65
IW-19	545562	Sierrita	497373.630	3525343.392	3155.39	05/13/09	413.90	2741.49
IW-20	545563	Sierrita	497364.739	3525568.770	3164.21	05/13/09	414.00	2750.21
IW-21	545564	Sierrita	497374.585	3525773.266	3171.37	05/13/09	415.60	2755.77

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2009

Well Name	ADWR 55 Registry No.	Survey Source	UTM East	UTM North	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
IW-22	200554	Sierrita	497369.590	3523273.592	3128.25	05/13/09	384.00	2744.25
IW-23	200555	Sierrita	497369.237	3522970.788	3128.53	05/13/09	375.00	2753.53
IW-24	200556	Sierrita	497371.670	3522633.594	3113.29	05/13/09	348.00	2765.29
M-8	87390	Sierrita	499658.916	3529692.237	2999.53	05/12/09	465.10	2534.43
M-9	501652	Sierrita	499984.173	3530303.954	2973.81	05/13/09	452.00	2521.81
M-10	501653	Sierrita	499659.027	3530143.114	3005.68	05/12/09	478.80	2526.88
M-20	906595	TBPI	499082.070	3528491.771	3054.00	05/12/09	496.80	2557.20
MH-1	803629	Sierrita	497372.392	3525872.911	3179.27	06/02/09	440.70	2738.57
MH-3	803630	Sierrita	497472.430	3525270.181	3155.87	06/02/09	425.18	2730.69
MH-5	803632	Sierrita	497477.352	3523725.339	3123.47	06/02/09	391.30	2732.17
MH-6	803633	Sierrita	497436.646	3522770.451	3133.97	06/02/09	379.45	2754.52
MH-7	803634	Sierrita	497502.475	3522016.471	3111.23	06/02/09	371.53	2739.70
MH-9	803635	Sierrita	496438.181	3521252.607	3162.57	06/02/09	370.30	2792.27
MH-10	803636	Sierrita	495717.770	3521236.861	3187.84	04/14/09	363.50	2824.34
MH-11	803637	Sierrita	498749.381	3524463.648	3041.76	05/13/09	375.75	2666.01
MH-13A	904071	Sierrita	498823.857	3523793.443	3026.23	04/15/09	332.19	2694.04
MH-13B	904072	Sierrita	498829.881	3523787.358	3025.63	04/15/09	336.50	2689.13
MH-13C	904073	Sierrita	498797.461	3523793.032	3028.46	04/15/09	343.08	2685.38
MH-14	528098	Sierrita	497517.626	3525269.340	3150.77	04/07/09	424.90	2725.87
MH-15E	528094	Sierrita	497584.800	3523274.327	3111.37	06/02/09	386.98	2724.39
MH-15W	528093	Sierrita	497524.067	3523275.003	3117.07	05/06/09	390.25	2726.82
MH-16E	528100	Sierrita	497576.673	3521870.233	3097.72	06/02/09	354.15	2743.57
MH-16W	528099	Sierrita	497516.074	3521870.818	3100.24	04/07/09	358.60	2741.64
MH-24	563799	Sierrita	497390.515	3523709.046	3131.16	06/02/09	396.50	2734.66
MH-25A	201528	Sierrita	498880.349	3526510.175	3056.57	04/15/09	455.90	2600.67
MH-25B	208429	Sierrita	498870.343	3526515.244	3058.22	04/15/09	457.28	2600.94
MH-25C	208426	Sierrita	498874.666	3526491.132	3057.24	04/15/09	456.41	2600.83
MH-26A	201527	Sierrita	498852.692	3527818.233	3070.89	04/21/09	497.85	2573.04
MH-26B	208427	Sierrita	498839.900	3527814.016	3069.11	04/21/09	494.90	2574.21
MH-26C	208428	Sierrita	498865.240	3527806.770	3070.50	04/21/09	493.95	2576.55
MH-28	903548	Sierrita	497471.427	3524609.980	3142.18	04/07/09	401.06	2741.12
MH-29	903649	Sierrita	497604.326	3522805.518	3123.15	04/07/09	379.90	2743.25
MH-30	903884	Sierrita	496682.307	3525926.812	3232.45	04/07/09	415.10	2817.35
MO-2007-1A	907342	Sierrita	500016.947	3529331.380	2967.65	04/01/09	426.86	2540.79
MO-2007-1A	907342	Sierrita	500016.947	3529331.380	2967.65	07/01/09	426.90	2540.75
MO-2007-1B	907210	Sierrita	500021.574	3529325.119	2966.82	04/01/09	427.23	2539.59
MO-2007-1B	907210	Sierrita	500021.574	3529325.119	2966.82	07/01/09	427.70	2539.12

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2009

Well Name	ADWR 55 Registry No.	Survey Source	UTM East	UTM North	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
MO-2007-1C	907209	Sierrita	500013.405	3529328.959	2968.58	04/01/09	424.90	2543.68
MO-2007-1C	907209	Sierrita	500013.405	3529328.959	2968.58	07/01/09	428.81	2539.77
MO-2007-2	906765	Sierrita	497912.410	3527621.102	3153.83	04/01/09	578.38	2575.45
MO-2007-3B	906816	Sierrita	500522.491	3528508.801	2912.15	04/01/09	357.70	2554.45
MO-2007-3B	906816	Sierrita	500522.491	3528508.801	2912.15	07/27/09	361.21	2550.94
MO-2007-3C	906817	Sierrita	500529.713	3528508.743	2911.90	04/01/09	358	2553.90
MO-2007-3C	906817	Sierrita	500529.713	3528508.743	2911.90	07/22/09	362	2549.90
MO-2007-4A	907213	Sierrita	500383.682	3525634.956	2923.63	04/02/09	306.69	2616.94
MO-2007-4A	907213	Sierrita	500383.682	3525634.956	2923.63	07/01/09	307.92	2615.71
MO-2007-4B	907212	Sierrita	500380.947	3525613.952	2923.57	04/02/09	306.72	2616.85
MO-2007-4B	907212	Sierrita	500380.947	3525613.952	2923.57	07/01/09	309.1	2614.47
MO-2007-4C	907211	Sierrita	500382.217	3525624.484	2923.66	04/02/09	311.49	2612.17
MO-2007-4C	907211	Sierrita	500382.217	3525624.484	2923.66	07/01/09	311.68	2611.98
MO-2007-5B	907456	Sierrita	500013.850	3523743.376	2944.35	04/02/09	269.20	2675.15
MO-2007-5C	907457	Sierrita	500014.152	3523736.459	2944.91	05/13/09	282.35	2662.56
MO-2007-6A	907607	Sierrita	498367.161	3521842.050	3043.37	04/02/09	304.87	2738.50
MO-2007-6A	907607	Sierrita	498367.161	3521842.050	3043.37	07/22/09	307.15	2736.22
MO-2007-6B	907606	Sierrita	498367.887	3521849.495	3043.05	04/02/09	316.05	2727.00
MO-2007-6B	907606	Sierrita	498367.887	3521849.495	3043.05	07/22/09	317.49	2725.56
MO-2009-1	910458	Sierrita	500534.089	3523369.438	2890.78	06/02/09	226.35	2664.43
MO-2009-1	910458	Sierrita	500534.089	3523369.438	2890.78	07/29/09	222.46	2668.32
NP-2	605898	HGC	500582.904	3528517.116	2906.56	04/24/09	354.80	2551.76
NP-2	605898	HGC	500582.904	3528517.116	2906.56	09/22/09	358.90	2547.66
PZ-7	561870	Sierrita	492533.171	3526357.485	3549.17	04/06/09	139.80	3409.37
PZ-8	561866	Sierrita	492972.681	3524196.243	3480.36	04/08/09	224.72	3255.64
TMM-1	616156	HGC	500018.323	3529736.231	2967.08	04/21/09	433.35	2533.73
1350	ND	TBPI	499357.609	3528452.906	3033.25	06/29/09	479.57	2553.68

Notes:

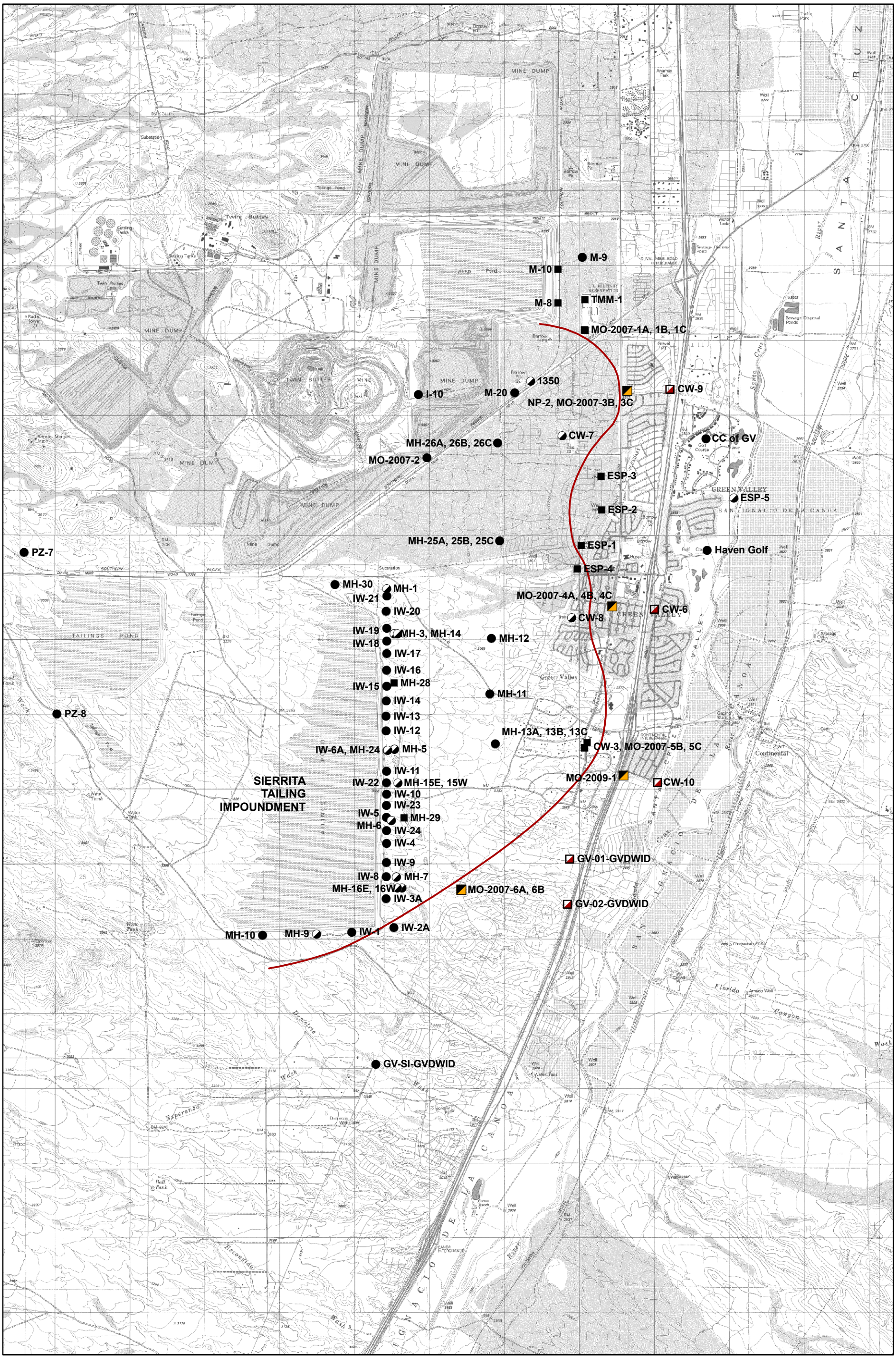
UTM = Universal Transverse Mercator, Zone 12 North American Datum 1983 (NAD83)

ft amsl = feet above mean sea level

Water level measurement for IW were collected under dynamic conditions and not used for contouring

HGC = Hydro Geo Chem, Inc.

FIGURES



Legend

- Annual Sampling
- Semiannual Sampling
- Quarterly Sampling - Drinking Water Supply Well
- Quarterly Sampling - Sentinel Well
- Water Level Only
- 250 mg/L Sulfate Contour (First Quarter 2009)

0 2000 4000 6000 Feet

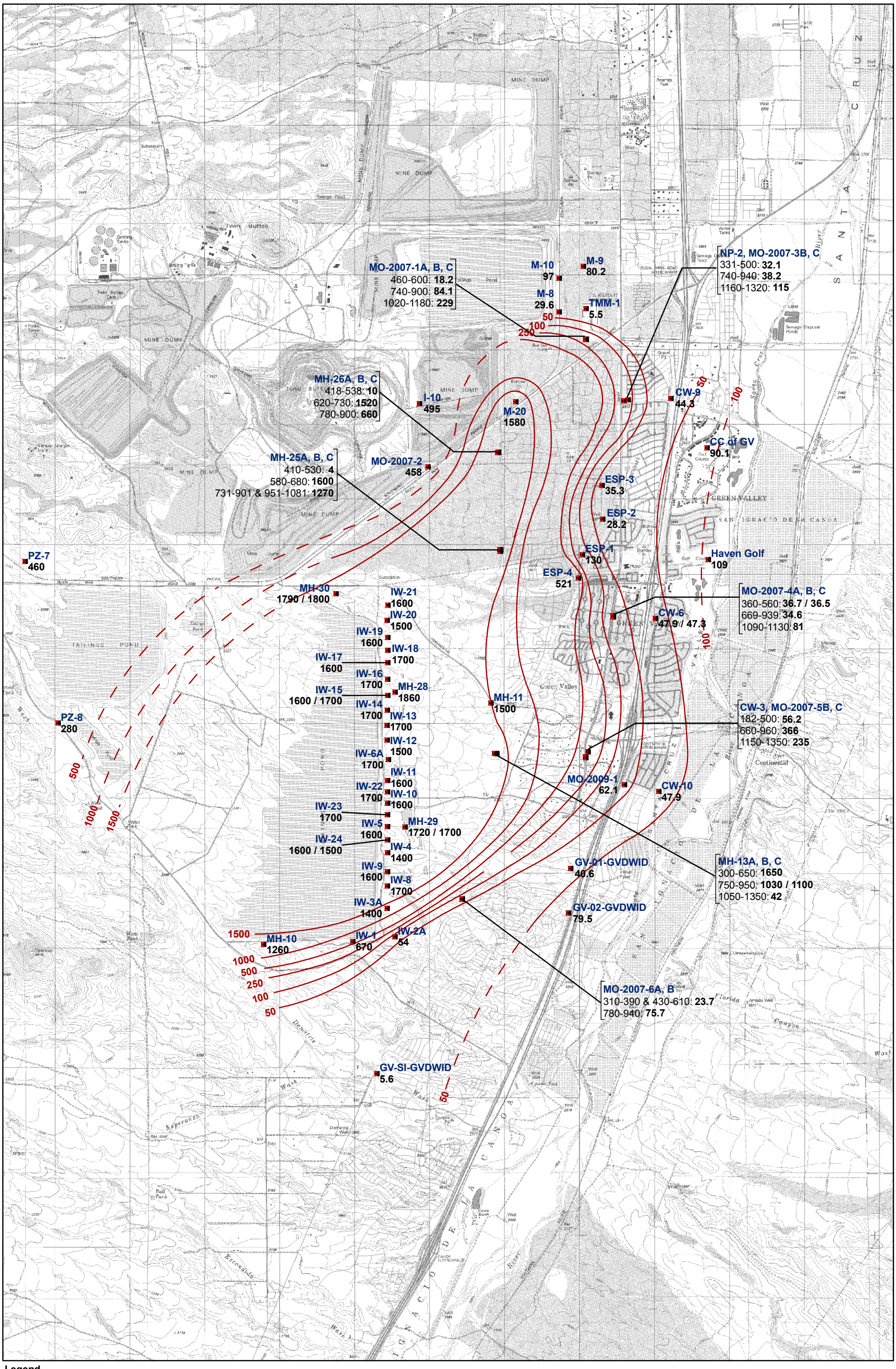
PROJECTION:
UTM Zone 12 NAD83

N

HYDRO GEO CHEM, INC.

SAMPLING LOCATION FOR PRE-IMPLEMENTATION GROUNDWATER MONITORING

Approved	Date	Author	Date	File Name	Figure
DRS	10/15/09	AMC	10/15/09	7830144G	1



Legend

- **ESP-1** Well Identification
- **130** Sulfate Concentration (mg/L)
- Sulfate Isoconcentration Contour (mg/L) (dashed where inferred)
- Co-located Wells
- Screen (ft bgs): Sulfate Concentration (mg/L)

0 2000 4000 6000 Feet

PROJECTION:
UTM Zone 12 NAD83

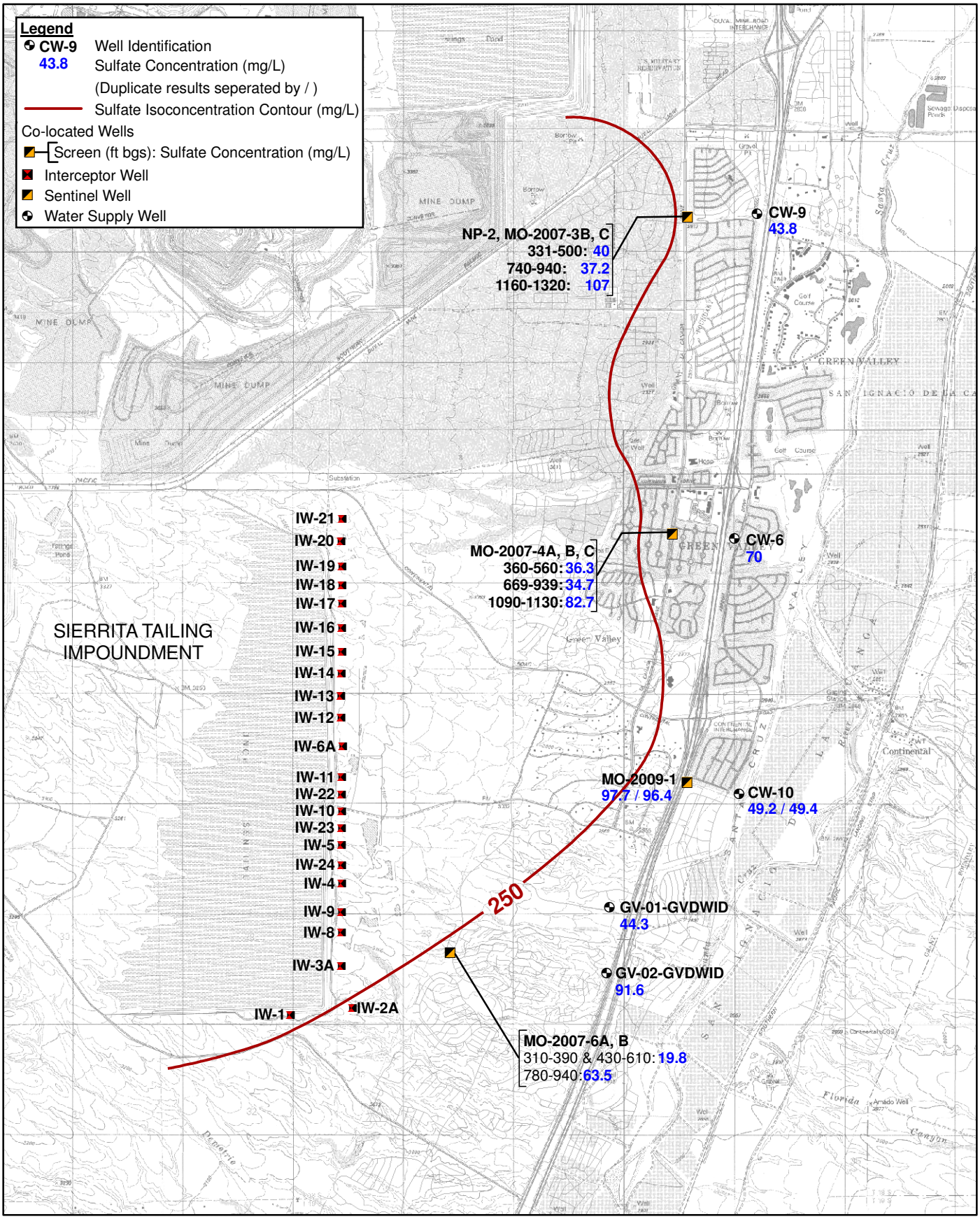
(Duplicate results seperated by "/")

N

HYDRO GEO CHEM, INC.

SULFATE CONCENTRATIONS IN GROUNDWATER
SECOND QUARTER 2009

Approved	Date	Author	Date	File Name	Figure
DRS	10/15/09	AMC	10/15/09	7830141G	2



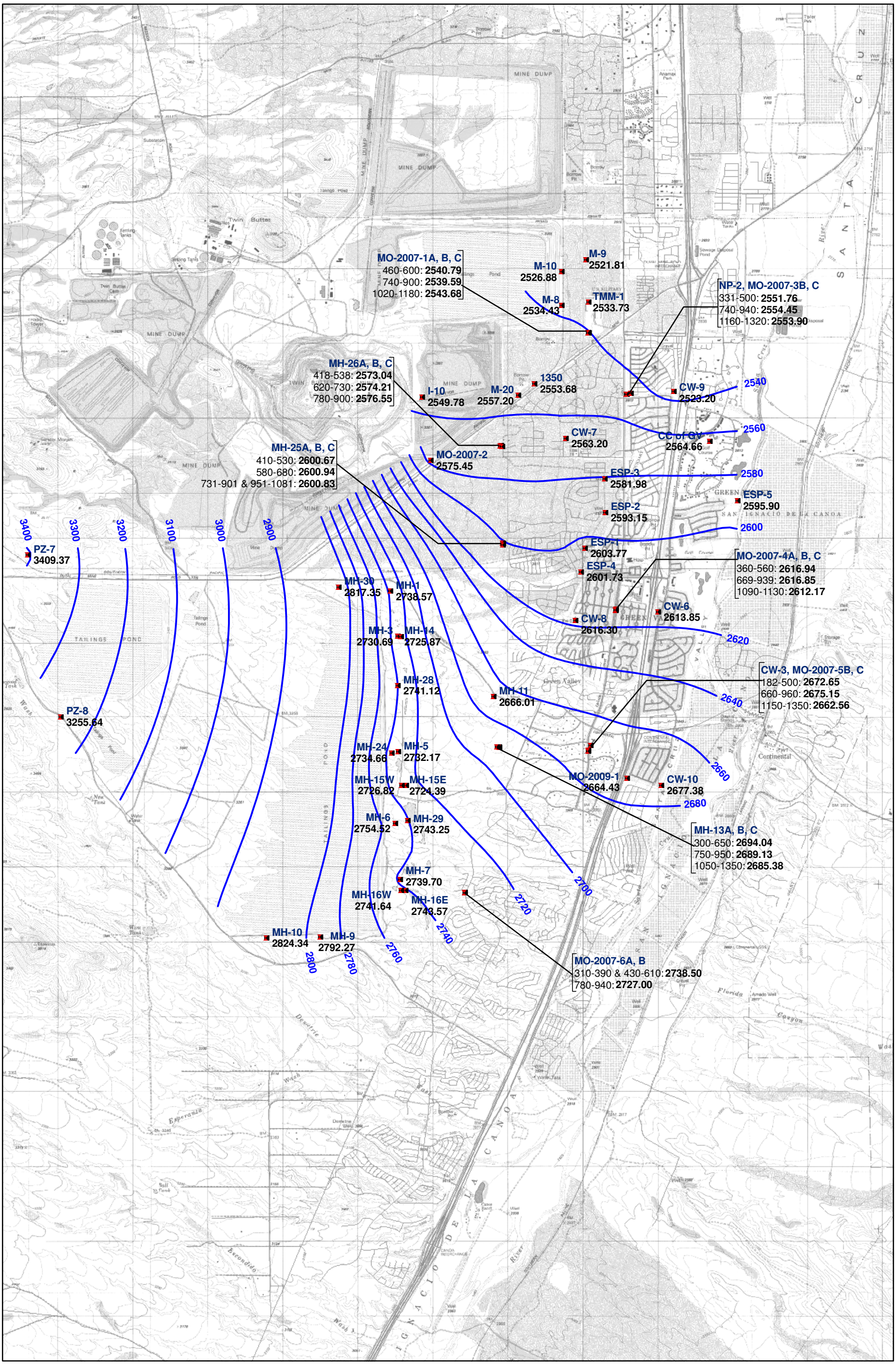
0 2000 4000 6000 Feet

PROJECTION: UTM Zone 12 NAD83

HYDRO GEO CHEM, INC.

SULFATE CONCENTRATION IN SENTINEL AND WATER SUPPLY WELLS THIRD QUARTER 2009

Approved	Date	Author	Date	File Name	Figure
DRS	10/15/09	AMC	10/15/09	7830145G	3



Legend

- **ESP-1** Well Identification
- **2603.77** Groundwater Elevation (ft amsl)
- Groundwater Elevation Contour (ft amsl)
- Co-located Wells (dashed where inferred)
- Screen (ft bgs): Groundwater Elevation (ft amsl)

0 2000 4000 6000 Feet

PROJECTION:
UTM Zone 12 NAD83

N

HYDRO GEO CHEM, INC.

GROUNDWATER ELEVATIONS
SECOND QUARTER 2009

Approved	Date	Author	Date	File Name	Figure
DRS	10/15/09	AMC	10/15/09	7830142G	4

APPENDIX A

AMEC INFRASTRUCTURE, INC. MO-2009-1 WELL SURVEY

MINE DATUM

	NORTHING	EASTING	ELEV
MO-2007-5C	92041.413	138676.491	2943.92
TOP OF PVC	91946.253	138683.876	2944.09
BENCHMARK			

STATE PLANE DATUM (GRID)

	NORTHING	EASTING	ELEV
MO-2007-5C	310134.900	984669.236	2944.91
TOP OF PVC	310061.794	984675.170	2947.08
BENCHMARK			
	LATITUDE	LONGITUDE	
TOP CASING	31°50'57.82639"N	110°59'59.46151"W	
BENCHMARK	31°50'56.90307"N	110°59'59.39988"W	

MINE DATUM

	NORTHING	EASTING	ELEV
MO-2007-5B	92041.919	138677.480	2941.36
TOP OF PVC	91946.053	138683.876	2944.09
BENCHMARK			

STATE PLANE DATUM (GRID)

	NORTHING	EASTING	ELEV
MO-2007-5B	310157.592	984668.055	2944.35
TOP OF PVC	310061.794	984675.170	2947.08
BENCHMARK			
	LATITUDE	LONGITUDE	
TOP CASING	31°50'57.82639"N	110°59'59.46151"W	
BENCHMARK	31°50'56.90307"N	110°59'59.39988"W	

MINE DATUM

	NORTHING	EASTING	ELEV
TW-2A	84151.090	130339.090	3109.29
MBP	84151.158	130340.694	3108.26
BM			

STATE PLANE DATUM (GRID)

	NORTHING	EASTING	ELEV
TW-2A	302192.496	976383.232	3112.28
MBP	302191.217	976387.844	3111.25
BM			
	LATITUDE	LONGITUDE	
MBP	31°49'39.71493"N	111°01'36.27631"W	
BM	31°49'39.70189"N	111°01'36.22298"W	

MINE DATUM

	NORTHING	EASTING	ELEV
MO-2009-01	90858.984	140385.619	2887.79
TOP OF PVC	90837.150	140390.853	2886.92
BENCHMARK			

STATE PLANE DATUM (GRID)

	NORTHING	EASTING	ELEV
MO-2009-01	308944.119	986383.874	2890.78
TOP OF PVC	308942.322	986389.121	2889.91
BENCHMARK			
	LATITUDE	LONGITUDE	
TOP CASING	31°50'45.69974"N	110°59'39.70959"W	
BENCHMARK	31°50'45.68173"N	110°59'39.64932"W	

MINE DATUM

	NORTHING	EASTING	ELEV
MO-2007-6A	85795.167	133277.678	3040.38
TOP OF PVC	85609.867	133265.054	3038.94
BENCHMARK			

STATE PLANE DATUM (GRID)

	NORTHING	EASTING	ELEV
MO-2007-6A	303871.810	979316.285	3043.37
TOP OF PVC	303886.212	979303.555	3041.93
BENCHMARK			
	LATITUDE	LONGITUDE	
TOP CASING	31°49'56.09361"N	111°01'02.11995"W	
BENCHMARK	31°49'56.23717"N	111°01'02.26612"W	

MINE DATUM

	NORTHING	EASTING	ELEV
MO-2007-6B	85819.809	133280.037	3040.06
TOP OF PVC	85609.867	133265.054	3038.94
BENCHMARK			

STATE PLANE DATUM (GRID)

	NORTHING	EASTING	ELEV
MO-2007-6B	303896.264	979318.460	3043.05
TOP OF PVC	303886.212	979303.555	3041.93
BENCHMARK			
	LATITUDE	LONGITUDE	
TOP CASING	31°49'56.19203"N	111°01'02.29139"W	
BENCHMARK	31°49'56.23717"N	111°01'02.26612"W	

SYMBOL LEGEND

- 3" PVC PIPE (INSIDE 6" CASING)
- MOTOR BASE PLATE
- BENCHMARK – SET 1/2" REBAR & ALUM. CAP

scale HORIZ: 1"=10'

10 0 10 20 feet

3B OF 8

JOB NO. 032006032

DATE: 7/25/2006
SCALE: 1"=10'

SHEET NO.

CHKD BY: DLG
DRAWN BY: JMA

CALL TWO WORKING DAYS BEFORE YOU DIG
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)
263-1100

PHELPS–DODGE SIERRITA, INC.

PROJECT: SHEET 2 WELL SITE DETAILS

T18S, R13E, G&SRM, PIMA COUNTY, ARIZONA

AMEC Infrastructure, Inc.
3295 WEST INA ROAD, SUITE 200
TUCSON, ARIZONA 85741
PHONE (520) 219–4998
FAX (520) 219–0499

amec

REVISIONS:

APPENDIX B

DATA VERIFICATION REPORT

GROUNDWATER SAMPLES COLLECTED BY FREEPORT-MCMORAN SIERRITA INC. DURING THE SECOND AND THIRD QUARTERS 2009

APPENDIX B

DATA VERIFICATION REPORT

GROUNDWATER SAMPLES COLLECTED BY FREEPORT-MCMORAN SIERRITA INC. DURING THE SECOND AND THIRD QUARTERS 2009

Prepared for:

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

Prepared by:

HYDRO GEO CHEM, INC.
51 West Wetmore Road
Tucson, Arizona 85705
(520) 293-1500

October 15, 2009

TABLE OF CONTENTS

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the second and third quarters 2009 by Freeport-McMoRan Sierrita Inc. (Sierrita) pursuant to Mitigation Order on Consent Docket No. P-50-06. All analytical results for groundwater samples collected during this reporting period were provided to Sierrita by ACZ Laboratories, Inc. (ACZ) for preparation of the Semiannual Groundwater Monitoring Report.

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

Appendix C of the main text of this report contains laboratory reports for samples collected by Sierrita including COC forms, laboratory correspondence, QC summaries, data qualifiers, and any case narratives. The 2009 analytical results for all 100 samples collected are contained in 18 reports having the ACZ Project numbers identified in the following table.

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

ACZ Project ID	Wells Reported
Wells sampled during the second quarter 2009: 73 *Duplicate samples collected during the second quarter 2009: 7*	
L75108	MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-3B, MO-2007-3C, MO-2007-4A MO-2007-4B, MO-2007-4C, MO-2007-6A, MO-2007-6B, MO-2007-2, MO-2007-5B DUP20090402A
L75184	MH-28, MH-29, DUP20090407B
L75193	MH-30, PZ-7, PZ-8, DUP20090407A
L75341	MH-13A, MH-13B, MH-13C, MH-25A, MH-25B, MH-25C, MH-10
L75352	ESP-1, ESP-2, ESP-3, ESP-4
L75353	DUP20090415A
L75451	IW-10, IW-11, IW-12, IW-13, IW-14, IW-18, IW-21, IW-23, IW-8, DUP20090420A
L75455	IW-1, IW-2A, IW-5, IW-6A, IW-15, IW-16, IW-17, IW-19, IW-20, IW-22, IW-24 DUP20090420B
L75457	IW-3A, IW-4, IW-5, IW-9, MH-26A, MH-26B, MH-26C
L75458	CCOFGV, HAVEN GOLF, TMM-1, CW-10, CW-6, CW-9, GV-01-GVDWID GV-02-GVDWID, GV-SI-GVDWID, MO-2009-1, DUP20090422A
L75548	CW-3, NP-2
L75820	I-10, M-8, M-9, M-10, M-20, MO-2007-5C
L75821	MH-11
Wells sampled during the third quarter 2009: 17 *Duplicate samples collected during the third quarter 2009: 3*	
L76904	MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-4A, MO-2007-4B, MO-2007-4C DUP20090701A
L77100	MO-2007-3C, MO-2007-6A, MO-2007-6B
L77224	MO-2007-3B
L77382	MO-2009-1, GV-01-GVDWID, GV-02-GVDWID, CW-9, CW-10, DUP20090729A DUP20090730A,
L78340	CW-6, NP-2

2. LABORATORY QUALITY CONTROL

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

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

2.1 Licensure

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

2.2 Analytical Methods

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

- SM4500 SO4-D (Gravimetric)
- U.S. Environmental Protection Agency (EPA) 300.0 (Ion-Chromatography)
- EPA 375.4 (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
EPA 375.4	1	5	10
SM4500 SO4-D	10	50	10

mg/L = milligrams per liter

[1] Target MDL from Table E.2 of QAPP

2.4 Timeliness

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

2.5 Quality Control Measurements

The following 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

2.6 Preparation Blanks, Calibration Blanks, and Calibration Verification Standards

Preparation blanks were run with each group of samples submitted for sulfate analyses using the gravimetric method (SM4500 SO4-D). 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.

Results from the analyses of the initial calibration blanks and initial calibration verification standards conducted by EPA Methods 300.0 and 375.4 also were reviewed. The results of each initial calibration blank analyzed showed no detections of the target analyte. Analytical results for the initial calibration verification standards and laboratory fortified blanks

showed percent recoveries that were within the acceptance criteria specified by the ACZ QA plan and the QAPP.

2.6.1 Analytical Spikes and Analytical Spike Duplicates

Analytical spike and spike duplicate samples were analyzed for all sulfate samples that were analyzed following EPA Method 300.0. Spike recoveries for most analyses were between 90 and 110 percent. Instances in which analytical spike recoveries were high, low or unusable were qualified with an "M1", "M2" or "M3" flag, respectively. However, in each case the method control sample recoveries were acceptable.

2.6.2 Laboratory Control Samples

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

2.6.3 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were also reviewed as part of this quality data verification report. Field duplicate samples are discussed in Section 3.1. The relative percent difference (RPDs) for most laboratory duplicate samples were within 20 percent, which is the tolerance range set by the laboratory. In some instances, the data were qualified with an "RA" flag indicating that the RPD was not used for data validation because the sample concentration was less than ten times the MDL, which is too low for accurate evaluation according to ACZ. In cases where the RPD could be calculated, the results met QA criteria and demonstrate an appropriate level of precision in laboratory analysis of these samples.

3. DATA QUALITY INDICATORS

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

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

Each of these DQIs is discussed below in relation to the second and third quarters 2009 groundwater sampling and analysis conducted by Sierrita.

3.1 Precision

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

- Laboratory duplicate samples
- Field duplicate samples

As discussed in Sections 2.5.2 and 2.5.4, there were no exceedances of RPD QA criteria for any laboratory duplicates. During this monitoring period, a total of 10 field duplicate samples were collected by Sierrita for filtered sulfate analysis (20090402DUPA, 20090407DUPA, DUP20090407B, DUP20090415A, DUP20090420A, DUP20090420B, DUP20090420B, DUP20090701A, DUP20090729A, and DUP20090730A). The collection of 10 field duplicate samples meets 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.

Results of the field duplicate samples collected are provided in the table below. The range of RPD values was between 0.41 and 6.57 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 deemed to be met.

Well ID	Duplicate Sample ID	ACZ Project ID	Sulfate (mg/L)	Duplicate (mg/L)	RPD (%)
MO-2007-4A	20090402DUPA	L75108	36.7	36.5	0.55
MH-30	20090407DUPA	L75193	1790	1800	0.56
MH-29	DUP20090407B	L75184	1720	1700	1.17
MH-13B	DUP20090415A	L75341	1030	1100	6.57
IW-24	DUP20090420A	L75451	1600	1500	6.45
IW-15	DUP20090420B	L75455	1600	1700	6.06
CW-6	DUP20090422A	L75458	47.9	47.3	1.26
MO-2007-1C	DUP20090701A	L76904	236	227	3.86
MO-2009-1	DUP20090729A	L77382	97.7	96.4	1.34
CW-10	DUP20090730A	L77382	49.2	49.4	0.41

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

3.2 Bias

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

3.3 Accuracy

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

this information, the overall accuracy of the data is judged sufficient for the purpose of aquifer characterization.

3.4 Representativeness

All samples were taken from locations specified in the Pre-implementation Monitoring Plan (Sierrita, 2009) using sampling procedures specified in the QAPP. Therefore, the samples are judged to provide a good representation of groundwater quality at the locations. The analytical data are judged to be representative of groundwater conditions because the analyses used standard procedures and methods that met QA/QC guidelines of the QAPP.

3.5 Comparability

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

3.6 Completeness

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

3.7 Sensitivity

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

4. REFERENCES

Hydro Geo Chem, Inc. 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. 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 C

ANALYTICAL DATA REPORTS FROM ACZ LABORATORIES, INC.

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

Analytical Report

April 13, 2009

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

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

cc: Dan Simpson

Project ID: OJ09LE
ACZ Project ID: L75108

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 03, 2009. This project has been assigned to ACZ's project number, L75108. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L75108. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after May 13, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-1A

ACZ Sample ID: ***L75108-01***
Date Sampled: *04/01/09 13:35*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	18.2			mg/L	0.5	3	04/07/09 1:30	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-1B

ACZ Sample ID: ***L75108-02***
Date Sampled: *04/01/09 12:44*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	84.1			mg/L	0.5	3	04/07/09 1:51	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-1C

ACZ Sample ID: ***L75108-03***
Date Sampled: *04/01/09 13:19*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	229			mg/L	3	10	04/07/09 17:34	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-3B

ACZ Sample ID: ***L75108-04***
Date Sampled: *04/01/09 09:47*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	38.2		*	mg/L	0.5	3	04/07/09 2:33	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-3C

ACZ Sample ID: ***L75108-05***
Date Sampled: *04/01/09 11:02*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	115		*	mg/L	3	10	04/07/09 17:55	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-2

ACZ Sample ID: ***L75108-06***
Date Sampled: *04/01/09 14:15*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	458		*	mg/L	5	30	04/07/09 18:17	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-4A

ACZ Sample ID: ***L75108-07***
Date Sampled: *04/02/09 11:49*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	36.7		*	mg/L	0.5	3	04/07/09 4:19	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-4B

ACZ Sample ID: ***L75108-08***
Date Sampled: *04/02/09 10:58*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	34.6		*	mg/L	0.5	3	04/07/09 4:40	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-4C

ACZ Sample ID: ***L75108-09***
Date Sampled: *04/02/09 11:39*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	81.0		*	mg/L	0.5	3	04/07/09 5:43	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: 20090402 DUP A

ACZ Sample ID: ***L75108-10***
Date Sampled: *04/02/09 00:00*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	36.5		*	mg/L	0.5	3	04/07/09 6:04	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-6A

ACZ Sample ID: ***L75108-11***
Date Sampled: *04/02/09 09:17*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	23.7		*	mg/L	0.5	3	04/07/09 6:26	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-6B

ACZ Sample ID: ***L75108-12***
Date Sampled: *04/02/09 09:00*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	75.7		*	mg/L	0.5	3	04/07/09 6:47	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-5B

ACZ Sample ID: ***L75108-13***
Date Sampled: *04/02/09 13:40*
Date Received: *04/03/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	366		*	mg/L	5	30	04/07/09 18:38	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75108***

Project ID: OJ09LE

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG261730													
WG261730ICV	ICV	04/01/09 20:26	WI090316-1	50		50.01	mg/L	100	90	110			
WG261730ICB	ICB	04/01/09 20:48				U	mg/L		-1.5	1.5			
WG261730ICV1	ICV	04/02/09 15:42	WI090316-1	50		50.42	mg/L	100.8	90	110			
WG261730ICB1	ICB	04/02/09 16:03				U	mg/L		-1.5	1.5			
WG261730ICV2	ICV	04/06/09 12:08	WI090316-1	50		51.03	mg/L	102.1	90	110			
WG261730ICB2	ICB	04/06/09 12:29				U	mg/L		-1.5	1.5			
WG261837													
WG261837ICV	ICV	04/06/09 20:34	WI090316-1	50		51.7	mg/L	103.4	90	110			
WG261837ICB	ICB	04/06/09 20:56				U	mg/L		-1.5	1.5			
WG261837LFB	LFB	04/06/09 21:17	WI081125-2	30		27.74	mg/L	92.5	90	110			
L75042-01AS	AS	04/06/09 23:44	WI081125-2	30	7.4	35.91	mg/L	95	90	110			
L75042-01DUP	DUP	04/07/09 0:06			7.4	7.23	mg/L				2.3	20	
L75108-04AS	AS	04/07/09 2:54	WI081125-2	30	38.2	64.53	mg/L	87.8	90	110			M2
L75108-04DUP	DUP	04/07/09 3:16			38.2	38.22	mg/L				0.1	20	
WG261837ICV1	ICV	04/07/09 16:10	WI090316-1	50		50.98	mg/L	102	90	110			
WG261837ICB1	ICB	04/07/09 16:31				U	mg/L		-1.5	1.5			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75108***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75108-04	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-05	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-06	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-07	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-08	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-09	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-10	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-11	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-12	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75108-13	WG261837	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75108
Date Received: 4/3/2009
Received By:
Date Printed: 4/3/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8166	1.6	14

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75108
Date Received: 4/3/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75108-01	MO-2007-1A									X		
L75108-02	MO-2007-1B									X		
L75108-03	MO-2007-1C									X		
L75108-04	MO-2007-3B									X		
L75108-05	MO-2007-3C									X		
L75108-06	MO-2007-2									X		
L75108-07	MO-2007-4A									X		
L75108-08	MO-2007-4B									X		
L75108-09	MO-2007-4C									X		
L75108-10	20090402 DUP A									X		
L75108-11	MO-2007-6A									X		
L75108-12	MO-2007-6B									X		
L75108-13	MO-2007-5B									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

L75108

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-1A	4/1/09 13:35	GW	1	X							
MO-2007-1B	4/1/09 12:44	GW	1	X							
MO-2007-1C	4/1/09 13:19	GW	1	X							
MO-2007-3B	4/1/09 09:47	GW	1	X							
MO-2007-3C	4/1/09 11:02	GW	1	X							
MO-2007-2	4/1/09 14:15	GW	1	X							
MO-2007-4A	4/2/09 11:49	GW	1	X							
MO-2007-4B	4/2/09 10:58	GW	1	X							
MO-2007-4C	4/2/09 11:39	GW	1	X							
20090402 DUPA	4/2/09	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 5921

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-2-09 15:00	[signature]	4-3-09 10:46

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

ACZ Laboratories, Inc. L75108

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-6A	4/2/09 09:17	GW	1	X							
MO-2007-6B	4/2/09 09:00	GW	1	X							
MO-2007-5B	4/2/09 13:40	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 5921

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-2-09 15:00	[signature]	4-3-09 10:40

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

April 21, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75184– **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 09, 2009. This project was assigned to ACZ's project number, L75184. 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, version 12.0. The enclosed results relate only to the samples received under L75184. 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.

Tony Antalek has reviewed and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-28

ACZ Sample ID: ***L75184-01***
Date Sampled: *04/07/09 11:40*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1860		*	mg/L	10	50	04/14/09 11:05	kah

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-29

ACZ Sample ID: ***L75184-02***
Date Sampled: *04/07/09 13:42*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1720		*	mg/L	10	50	04/14/09 11:07	kah

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: DUP20090407B

ACZ Sample ID: ***L75184-03***
Date Sampled: *04/07/09 00:00*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1700		*	mg/L	10	50	04/14/09 11:09	kah

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75184***

Project ID: OJ09LE

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262099													
WG262099PBW1	PBW	04/10/09 13:04				U	mg/L		-20	20			
WG262099LCSW2	LCSW	04/10/09 13:23	WC090330-1	820.0001		783.1	mg/L	95.5	90	110			
WG262099PBW2	PBW	04/10/09 17:02				U	mg/L		-20	20			
WG262099LCSW5	LCSW	04/10/09 17:20	WC090330-1	820.0001		785.9	mg/L	95.8	90	110			
WG262099PBW3	PBW	04/10/09 21:39				U	mg/L		-20	20			
WG262099LCSW8	LCSW	04/10/09 21:58	WC090330-1	820.0001		795.1	mg/L	97	90	110			
L75186-01DUP	DUP	04/11/09 0:03			132	130.6	mg/L				1.1	20	
WG262099PBW4	PBW	04/11/09 2:12				U	mg/L		-20	20			
WG262099LCSW11	LCSW	04/11/09 2:31	WC090330-1	820.0001		781.3	mg/L	95.3	90	110			
WG262099LCSW14	LCSW	04/11/09 7:23	WC090330-1	820.0001		798.4	mg/L	97.4	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.979	mg/L	99	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.09	0.09			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	1		1.006	mg/L	100.6	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	1	U	1.085	mg/L	108.5	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	1	U	1.078	mg/L	107.8	85	115	0.65	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.02		.02065	mg/L	103.3	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00088	0.00088			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.01		.00994	mg/L	99.4	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.02	U	.02258	mg/L	112.9	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.02	U	.02256	mg/L	112.8	70	130	0.09	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.0508	mg/L	101.6	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.0011	0.0011			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05005		.05681	mg/L	113.5	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1001	.002	.1123	mg/L	110.2	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1001	.002	.1097	mg/L	107.6	70	130	2.34	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		2.0182	mg/L	100.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.009	0.009			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.4952	mg/L	99	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	.008	.5145	mg/L	101.3	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	.008	.517	mg/L	101.8	85	115	0.48	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75184***

Project ID: OJ09LE

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.04903	mg/L	98.1	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05005		.05332	mg/L	106.5	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1001	U	.11502	mg/L	114.9	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1001	U	.11368	mg/L	113.6	70	130	1.17	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05137	mg/L	102.7	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05		.05526	mg/L	110.5	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1	U	.10074	mg/L	100.7	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1	U	.0994	mg/L	99.4	70	130	1.34	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		97.94	mg/L	97.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.6	0.6			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	67.97008		69.26	mg/L	101.9	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	67.97008	75.2	142.51	mg/L	99	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	67.97008	75.2	143.13	mg/L	99.9	85	115	0.43	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262216													
WG262216ICB	ICB	04/15/09 8:26				U	mg/L		-3	3			
WG262216ICV	ICV	04/15/09 8:26	WI090121-2	54.835		57.9	mg/L	105.6	90	110			
L75160-02AS	AS	04/15/09 9:03	WI090309-3	30	6	39.3	mg/L	111	90	110			M1
L75179-01DUP	DUP	04/15/09 9:03			26	26.1	mg/L				0.4	20	
WG262216LFB2	LFB	04/15/09 9:07	WI090309-3	30		32.2	mg/L	107.3	90	110			
WG262216LFB1	LFB	04/15/09 9:37	WI090309-3	30		31.9	mg/L	106.3	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.938	mg/L	96.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.484	mg/L	96.8	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	U	.501	mg/L	100.2	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	U	.515	mg/L	103	85	115	2.76	20	

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Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2.002		1.969	mg/L	98.4	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.498	mg/L	99.6	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	.02	.509	mg/L	97.8	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	.02	.512	mg/L	98.4	85	115	0.59	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262099													
WG262099LCSW1	LCSW	04/10/09 13:05	PCN31856	1408.8		1510	umhos/cm	107.2	90	110			
WG262099LCSW4	LCSW	04/10/09 17:03	PCN31856	1408.8		1514	umhos/cm	107.5	90	110			
WG262099LCSW7	LCSW	04/10/09 21:40	PCN31856	1408.8		1510	umhos/cm	107.2	90	110			
L75186-01DUP	DUP	04/11/09 0:03			3690	4060	umhos/cm				9.5	20	
WG262099LCSW10	LCSW	04/11/09 2:13	PCN31856	1408.8		1494	umhos/cm	106	90	110			
WG262099LCSW13	LCSW	04/11/09 7:05	PCN31856	1408.8		1466	umhos/cm	104.1	90	110			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.955	mg/L	97.8	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.491	mg/L	98.2	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	U	.506	mg/L	101.2	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	U	.506	mg/L	101.2	85	115	0	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262087													
WG262087ICV1	ICV	04/10/09 13:58	WI090409-2	.3		.2729	mg/L	91	90	110			
WG262087ICB1	ICB	04/10/09 13:59				U	mg/L		-0.015	0.015			
WG262115													
WG262074LRB	LRB	04/10/09 15:42				U	mg/L		-0.015	0.015			
WG262074LFB	LFB	04/10/09 15:43	WI090409-5	.2		.1884	mg/L	94.2	90	110			
L75184-02DUP	DUP	04/10/09 15:58			U	U	mg/L				0	20	RA
L75184-03LFM	LFM	04/10/09 15:59	WI090409-5	.2	U	.188	mg/L	94	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262278													
WG262278ICV	ICV	04/15/09 11:19	WC090414-1	2		1.93	mg/L	96.5	95	105			
WG262278ICB	ICB	04/15/09 11:25				U	mg/L		-0.3	0.3			
WG262278LFB1	LFB	04/15/09 11:35	WC090302-4	5		4.8	mg/L	96	90	110			
L75139-03AS	AS	04/15/09 11:41	WC090302-4	100	80	172.4	mg/L	92.4	90	110			
L75139-03DUP	DUP	04/15/09 11:45			80	76.8	mg/L				4.1	20	
WG262278LFB2	LFB	04/15/09 13:28	WC090302-4	5		4.6	mg/L	92	90	110			

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Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.942	mg/L	97.1	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.06	0.06			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	1		.985	mg/L	98.5	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	1	5.57	6.168	mg/L	59.8	85	115			M3
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	1	5.57	6.219	mg/L	64.9	85	115	0.82	20	M3

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05035	mg/L	100.7	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05005		.04875	mg/L	97.4	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1001	.0006	.09738	mg/L	96.7	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1001	.0006	.09582	mg/L	95.1	70	130	1.61	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		97.59	mg/L	97.6	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.6	0.6			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	49.96908		49.37	mg/L	98.8	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	49.96908	9.5	60.83	mg/L	102.7	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	49.96908	9.5	60.61	mg/L	102.3	85	115	0.36	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.9319	mg/L	96.6	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.015	0.015			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.5104	mg/L	102.1	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	.575	1.0597	mg/L	96.9	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	.575	1.0669	mg/L	98.4	85	115	0.68	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262108													
WG262108ICV	ICV	04/15/09 18:06	II090325-1	.005		.00493	mg/L	98.6	95	105			
WG262108ICB	ICB	04/15/09 18:08				U	mg/L		-0.0002	0.0002			
WG262108LRB	LRB	04/15/09 20:18				U	mg/L		-0.00044	0.00044			
WG262108LFB	LFB	04/15/09 20:20	II090407-2	.002		.00194	mg/L	97	85	115			
L75182-03LFM	LFM	04/15/09 20:57	II090407-2	.002	U	.00196	mg/L	98	85	115			
L75182-03LFMD	LFMD	04/15/09 20:59	II090407-2	.002	U	.00204	mg/L	102	85	115	4	20	

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Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262150													
WG262150ICV	ICV	04/13/09 17:48	II090115-1	2		2.044	mg/L	102.2	95	105			
WG262150ICB	ICB	04/13/09 17:52				U	mg/L		-0.03	0.03			
WG262150LFB	LFB	04/13/09 18:04	II090408-2	.5		.555	mg/L	111	85	115			
L75182-01AS	AS	04/13/09 18:10	II090408-2	.5	U	.566	mg/L	113.2	85	115			
L75182-01ASD	ASD	04/13/09 18:13	II090408-2	.5	U	.56	mg/L	112	85	115	1.07	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2.004		1.921	mg/L	95.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.484	mg/L	96.8	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	U	.506	mg/L	101.2	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	U	.51	mg/L	102	85	115	0.79	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
WG262263													
WG262263ICV	ICV	04/14/09 19:21	WI090318-4	2.416		2.432	mg/L	100.7	90	110			
WG262263ICB	ICB	04/14/09 19:22				U	mg/L		-0.06	0.06			
WG262269													
WG262269ICV	ICV	04/14/09 21:01	WI090318-4	2.416		2.479	mg/L	102.6	90	110			
WG262269ICB	ICB	04/14/09 21:02				U	mg/L		-0.06	0.06			
WG262269LFB	LFB	04/14/09 21:04	WI090317-8	2		2.027	mg/L	101.4	90	110			
L75184-01AS	AS	04/14/09 21:06	WI090317-8	2	1.35	3.403	mg/L	102.7	90	110			
L75184-02DUP	DUP	04/14/09 21:09			.63	.631	mg/L				0.2	20	

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262229													
WG262229LCSW3	LCSW	04/14/09 13:40	PCN31552	6		6.1	units	101.7	90	110			
WG262229LCSW6	LCSW	04/14/09 18:52	PCN31552	6		6.04	units	100.7	90	110			
L75186-02DUP	DUP	04/14/09 19:37			4	3.94	units				1.5	20	
WG262229LCSW9	LCSW	04/14/09 21:12	PCN31552	6		6.04	units	100.7	90	110			
WG262229LCSW12	LCSW	04/15/09 1:39	PCN31552	6		6.05	units	100.8	90	110			
WG262229LCSW15	LCSW	04/15/09 5:27	PCN31552	6		6.07	units	101.2	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	20		19.4	mg/L	97	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.9	0.9			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	99.76186		96.98	mg/L	97.2	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	99.76186	2.3	104.42	mg/L	102.4	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	99.76186	2.3	103.72	mg/L	101.7	85	115	0.67	20	

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Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262226													
WG262226PBW	PBW	04/14/09 11:40				U	mg/L		-20	20			
WG262226LCSW	LCSW	04/14/09 11:40	PCN31923	260		258	mg/L	99.2	80	120			
L75184-01DUP	DUP	04/14/09 11:50			3260	3260	mg/L				0	20	
L75222-04DUP	DUP	04/14/09 11:59			20600	20312	mg/L				1.4	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262322													
WG262322ICV	ICV	04/16/09 9:31	MS090326-1	.05		.05291	mg/L	105.8	90	110			
WG262322ICB	ICB	04/16/09 9:35				U	mg/L		-0.00022	0.00022			
WG262322LFB	LFB	04/16/09 9:43	MS090409-2	.05005		.05365	mg/L	107.2	85	115			
L75184-03AS	AS	04/16/09 9:59	MS090409-2	.1001	.0011	.10506	mg/L	103.9	70	130			
L75184-03ASD	ASD	04/16/09 10:03	MS090409-2	.1001	.0011	.10388	mg/L	102.7	70	130	1.13	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		96.6	mg/L	96.6	95	105			
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		97.15	mg/L	97.2	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.9	0.9			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-6	6			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	98.21624		96	mg/L	97.7	85	115			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	98.21624		96.51	mg/L	98.3	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	98.21624	22.9	122.33	mg/L	101.2	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	98.21624	22.9	121.78	mg/L	100.7	85	115	0.45	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262219													
WG262219PBW	PBW	04/14/09 10:27				U	mg/L		-30	30			
WG262219LCSW	LCSW	04/14/09 10:29	WC080910-2	100		105	mg/L	105	80	120			
L75253-01DUP	DUP	04/14/09 11:21			30	20	mg/L				40	20	RA

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05061	mg/L	101.2	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.0501		.04763	mg/L	95.1	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1002	U	.09534	mg/L	95.1	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1002	U	.09414	mg/L	94	70	130	1.27	20	

FMI Gold & Copper - Sierrita
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ACZ Project ID: ***L75184***

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05208	mg/L	104.2	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05		.0501	mg/L	100.2	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1	.0249	.1308	mg/L	105.9	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1	.0249	.1299	mg/L	105	70	130	0.69	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.929	mg/L	96.5	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.555	mg/L	111	85	115			
L75182-01AS	AS	04/10/09 19:27	II090313-2	.5	.37	.877	mg/L	101.4	85	115			
L75182-01ASD	ASD	04/10/09 19:31	II090313-2	.5	.37	.887	mg/L	103.4	85	115	1.13	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75184***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75184-01	WG262053	Iron, 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.
	WG262216	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262115	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).
	WG262219	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75184-02	WG262053	Iron, 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.
	WG262216	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262115	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).
	WG262219	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75184-03	WG262053	Iron, 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.
	WG262216	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262115	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).
	WG262219	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75184
Date Received: 4/9/2009
Received By:
Date Printed: 4/9/2009

Receipt Verification

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

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

One of three vials for sample #1 contained headspace.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2507	3.8	12

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75184
Date Received: 4/9/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75184-01	MH-28		Y		Y							
L75184-02	MH-29		Y		Y							
L75184-03	DUP20090407B		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L75184

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Ambient							
MH-28	04/07/09 11:40	GW	8	x							
MH-29	04/07/09 13:42	GW	8	x							
DUP20090407B	04/07/09	GW	8	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 Dan Simpson contains only "SO4" results with QC Summary.

Please generate a third report containing "VRP Suite" Results with QC Summary and send to Rick Smith of URS.
(Rick_Smith@URSCorp.com)
UPS Tracking #1Z 867 7E4 23 1000 5903

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-8-09 15:00	CKT	4/9/09 1030

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

April 22, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75193– **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 09, 2009. This project was assigned to ACZ's project number, L75193. 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, version 12.0. The enclosed results relate only to the samples received under L75193. 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.

Tony Antalek has reviewed and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-30

ACZ Sample ID: ***L75193-01***
Date Sampled: *04/07/09 09:25*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1790			mg/L	10	50	04/14/09 11:43	kah

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: PZ-7

ACZ Sample ID: ***L75193-02***
Date Sampled: *04/06/09 11:00*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	460			mg/L	10	50	04/14/09 11:53	kah

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: 20090407DUPA

ACZ Sample ID: ***L75193-03***
Date Sampled: *04/07/09 00:00*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1800			mg/L	20	100	04/17/09 11:53	jfl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: PZ-8

ACZ Sample ID: ***L75193-04***
Date Sampled: *04/08/09 09:45*
Date Received: *04/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	280			mg/L	10	50	04/14/09 12:13	kah

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75193***

Project ID: OJ09LE

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262099													
WG262099PBW1	PBW	04/10/09 13:04				U	mg/L		-20	20			
WG262099LCSW2	LCSW	04/10/09 13:23	WC090330-1	820.0001		783.1	mg/L	95.5	90	110			
WG262099PBW2	PBW	04/10/09 17:02				U	mg/L		-20	20			
WG262099LCSW5	LCSW	04/10/09 17:20	WC090330-1	820.0001		785.9	mg/L	95.8	90	110			
WG262099PBW3	PBW	04/10/09 21:39				U	mg/L		-20	20			
WG262099LCSW8	LCSW	04/10/09 21:58	WC090330-1	820.0001		795.1	mg/L	97	90	110			
WG262099PBW4	PBW	04/11/09 2:12				U	mg/L		-20	20			
WG262099LCSW11	LCSW	04/11/09 2:31	WC090330-1	820.0001		781.3	mg/L	95.3	90	110			
L75220-01DUP	DUP	04/11/09 4:35			264	264	mg/L				0	20	
WG262099LCSW14	LCSW	04/11/09 7:23	WC090330-1	820.0001		798.4	mg/L	97.4	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		2.031	mg/L	101.6	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.09	0.09			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	1		1.062	mg/L	106.2	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	1	U	1.094	mg/L	109.4	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	1	U	1.124	mg/L	112.4	85	115	2.71	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.979	mg/L	99	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.09	0.09			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	1		1.006	mg/L	100.6	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	1	U	1.002	mg/L	100.2	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	1	U	1.006	mg/L	100.6	85	115	0.4	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.02		.02065	mg/L	103.3	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00088	0.00088			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.01		.00994	mg/L	99.4	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.02	U	.02258	mg/L	112.9	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.02	U	.02256	mg/L	112.8	70	130	0.09	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.02	U	.02132	mg/L	106.6	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.02	U	.02152	mg/L	107.6	70	130	0.93	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.0508	mg/L	101.6	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.0011	0.0011			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05005		.05681	mg/L	113.5	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1001	.002	.1123	mg/L	110.2	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1001	.002	.1097	mg/L	107.6	70	130	2.34	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.1001	U	.109	mg/L	108.9	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.1001	U	.1116	mg/L	111.5	70	130	2.36	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		2.0617	mg/L	103.1	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.009	0.009			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.511	mg/L	102.2	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	.068	.588	mg/L	104	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	.068	.5928	mg/L	105	85	115	0.81	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		2.0182	mg/L	100.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.009	0.009			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.4952	mg/L	99	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	.017	.4974	mg/L	96.1	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	.017	.4879	mg/L	94.2	85	115	1.93	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.04903	mg/L	98.1	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05005		.05332	mg/L	106.5	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1001	U	.11502	mg/L	114.9	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1001	U	.11368	mg/L	113.6	70	130	1.17	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.1001	U	.10906	mg/L	109	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.1001	U	.11288	mg/L	112.8	70	130	3.44	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05137	mg/L	102.7	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05		.05526	mg/L	110.5	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1	U	.10074	mg/L	100.7	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1	U	.0994	mg/L	99.4	70	130	1.34	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.1	U	.10358	mg/L	103.6	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.1	U	.10542	mg/L	105.4	70	130	1.76	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	100		101.16	mg/L	101.2	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.6	0.6			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	67.97008		72.74	mg/L	107	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	67.97008	184	246.91	mg/L	92.6	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	67.97008	184	248.65	mg/L	95.1	85	115	0.7	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		97.94	mg/L	97.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.6	0.6			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	67.97008		69.26	mg/L	101.9	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	67.97008	431	474.27	mg/L	63.7	85	115			M3
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	67.97008	431	470.26	mg/L	57.8	85	115	0.85	20	M3

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262276													
WG262276ICB	ICB	04/15/09 8:26				U	mg/L		-3	3			
WG262276ICV	ICV	04/15/09 8:26	WI090121-2	54.835		57.9	mg/L	105.6	90	110			
WG262276LFB1	LFB	04/15/09 10:27	WI090309-3	30		32.2	mg/L	107.3	90	110			
L75193-02DUP	DUP	04/15/09 10:27			93	92.9	mg/L				0.1	20	
WG262276LFB2	LFB	04/15/09 10:36	WI090309-3	30		31.3	mg/L	104.3	90	110			
L75193-01AS	AS	04/15/09 10:39	10XCL	30	140	171	mg/L	103.3	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		1.963	mg/L	98.2	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.03	0.03			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.498	mg/L	99.6	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	U	.5	mg/L	100	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	U	.513	mg/L	102.6	85	115	2.57	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.938	mg/L	96.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.484	mg/L	96.8	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	U	.471	mg/L	94.2	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	U	.461	mg/L	92.2	85	115	2.15	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2.002		1.986	mg/L	99.2	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.03	0.03			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.5	mg/L	100	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	.03	.522	mg/L	98.4	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	.03	.521	mg/L	98.2	85	115	0.19	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2.002		1.969	mg/L	98.4	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.498	mg/L	99.6	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	.01	.465	mg/L	91	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	.01	.461	mg/L	90.2	85	115	0.86	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262099													
WG262099LCSW1	LCSW	04/10/09 13:05	PCN31856	1408.8		1510	umhos/cm	107.2	90	110			
WG262099LCSW4	LCSW	04/10/09 17:03	PCN31856	1408.8		1514	umhos/cm	107.5	90	110			
WG262099LCSW7	LCSW	04/10/09 21:40	PCN31856	1408.8		1510	umhos/cm	107.2	90	110			
WG262099LCSW10	LCSW	04/11/09 2:13	PCN31856	1408.8		1494	umhos/cm	106	90	110			
L75220-01DUP	DUP	04/11/09 4:35			4650	4630	umhos/cm				0.4	20	
WG262099LCSW13	LCSW	04/11/09 7:05	PCN31856	1408.8		1466	umhos/cm	104.1	90	110			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		1.995	mg/L	99.8	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.03	0.03			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.506	mg/L	101.2	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	U	.522	mg/L	104.4	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	U	.527	mg/L	105.4	85	115	0.95	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.955	mg/L	97.8	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.491	mg/L	98.2	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	U	.489	mg/L	97.8	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	U	.48	mg/L	96	85	115	1.86	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262453													
WG262453ICV	ICV	04/18/09 19:54	WI090409-2	.3		.2792	mg/L	93.1	90	110			
WG262453ICB	ICB	04/18/09 19:55				U	mg/L		-0.015	0.015			
WG262417LRB	LRB	04/18/09 19:56				U	mg/L		-0.009	0.009			
WG262417LFB	LFB	04/18/09 19:57	WI090409-5	.2		.184	mg/L	92	90	110			
L75188-02DUP	DUP	04/18/09 20:00			.009	.0065	mg/L				32.3	20	RA
L75188-03LFM	LFM	04/18/09 20:02	WI090409-5	.2	U	.1791	mg/L	89.6	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262278													
WG262278ICV	ICV	04/15/09 11:19	WC090414-1	2		1.93	mg/L	96.5	95	105			
WG262278ICB	ICB	04/15/09 11:25				U	mg/L		-0.3	0.3			
WG262278LFB1	LFB	04/15/09 11:35	WC090302-4	5		4.8	mg/L	96	90	110			
L75188-02AS	AS	04/15/09 12:43	WC090302-4	5	.1	4.6	mg/L	90	90	110			
L75188-02DUP	DUP	04/15/09 12:46			.1	.16	mg/L				46.2	20	RA
WG262278LFB2	LFB	04/15/09 13:28	WC090302-4	5		4.6	mg/L	92	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		2.007	mg/L	100.4	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.06	0.06			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	1		1.025	mg/L	102.5	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	1	.03	1.064	mg/L	103.4	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	1	.03	1.068	mg/L	103.8	85	115	0.38	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.942	mg/L	97.1	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.06	0.06			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	1		.985	mg/L	98.5	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	1	U	.943	mg/L	94.3	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	1	U	.933	mg/L	93.3	85	115	1.07	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05035	mg/L	100.7	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05005		.04875	mg/L	97.4	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1001	.0006	.09738	mg/L	96.7	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1001	.0006	.09582	mg/L	95.1	70	130	1.61	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.1001	.0021	.09556	mg/L	93.4	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.1001	.0021	.09818	mg/L	96	70	130	2.7	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	100		100.08	mg/L	100.1	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.6	0.6			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	49.96908		51.74	mg/L	103.5	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	49.96908	48.7	99.36	mg/L	101.4	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	49.96908	48.7	101.35	mg/L	105.4	85	115	1.98	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		97.59	mg/L	97.6	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.6	0.6			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	49.96908		49.37	mg/L	98.8	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	49.96908	193	233.2	mg/L	80.4	85	115			M3
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	49.96908	193	230.36	mg/L	74.8	85	115	1.23	20	M3

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		1.9618	mg/L	98.1	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.015	0.015			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.5215	mg/L	104.3	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	.029	.5535	mg/L	104.9	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	.029	.557	mg/L	105.6	85	115	0.63	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.9319	mg/L	96.6	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.015	0.015			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.5104	mg/L	102.1	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	.343	.813	mg/L	94	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	.343	.8042	mg/L	92.2	85	115	1.09	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262324													
WG262324ICV	ICV	04/16/09 14:45	II090325-1	.005		.00523	mg/L	104.6	95	105			
WG262324ICB	ICB	04/16/09 14:47				U	mg/L		-0.0002	0.0002			
WG262324LRB	LRB	04/16/09 14:53				U	mg/L		-0.00044	0.00044			
WG262324LFB	LFB	04/16/09 14:55	II090407-2	.002		.002	mg/L	100	85	115			
L75189-01LFM	LFM	04/16/09 14:59	II090407-2	.002	U	.00189	mg/L	94.5	85	115			
L75189-01LFMD	LFMD	04/16/09 15:01	II090407-2	.002	U	.00195	mg/L	97.5	85	115	3.13	20	
L75193-03LFM	LFM	04/16/09 15:31	II090407-2	.002	U	.00192	mg/L	96	85	115			
L75193-03LFMD	LFMD	04/16/09 15:34	II090407-2	.002	U	.00191	mg/L	95.5	85	115	0.52	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262150													
WG262150ICV	ICV	04/13/09 17:48	II090115-1	2		2.044	mg/L	102.2	95	105			
WG262150ICB	ICB	04/13/09 17:52				U	mg/L		-0.03	0.03			
WG262150LFB	LFB	04/13/09 18:04	II090408-2	.5		.555	mg/L	111	85	115			
L75189-02AS	AS	04/13/09 18:55	II090408-2	.5	U	.55	mg/L	110	85	115			
L75189-02ASD	ASD	04/13/09 18:58	II090408-2	.5	U	.549	mg/L	109.8	85	115	0.18	20	
WG262289													
WG262289ICV	ICV	04/15/09 11:59	II090115-1	2		2.057	mg/L	102.9	95	105			
WG262289ICB	ICB	04/15/09 12:03				U	mg/L		-0.03	0.03			
WG262289LFB	LFB	04/15/09 12:16	II090408-2	.5		.548	mg/L	109.6	85	115			
L75162-01AS	AS	04/15/09 12:22	II090408-2	.5	U	.555	mg/L	111	85	115			
L75162-01ASD	ASD	04/15/09 12:25	II090408-2	.5	U	.555	mg/L	111	85	115	0	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2.004		1.938	mg/L	96.7	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.03	0.03			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.494	mg/L	98.8	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	U	.5	mg/L	100	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	U	.499	mg/L	99.8	85	115	0.2	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2.004		1.921	mg/L	95.9	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.484	mg/L	96.8	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	U	.462	mg/L	92.4	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	U	.456	mg/L	91.2	85	115	1.31	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
WG262391													
WG262391ICV	ICV	04/16/09 18:26	WI090318-4	2.416		2.428	mg/L	100.5	90	110			
WG262391ICB	ICB	04/16/09 18:28				U	mg/L		-0.06	0.06			
WG262393													
WG262393ICV	ICV	04/16/09 19:28	WI090318-4	2.416		2.476	mg/L	102.5	90	110			
WG262393ICB	ICB	04/16/09 19:29				U	mg/L		-0.06	0.06			
WG262393LFB	LFB	04/16/09 19:31	WI090317-8	2		2.062	mg/L	103.1	90	110			
L75193-02DUP	DUP	04/16/09 19:36			1.33	1.327	mg/L				0.2	20	
L75193-01AS	AS	04/16/09 20:12	WI090317-8	6	2.11	8.185	mg/L	101.3	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262229													
WG262229LCSW3	LCSW	04/14/09 13:40	PCN31552	6		6.1	units	101.7	90	110			
WG262229LCSW6	LCSW	04/14/09 18:52	PCN31552	6		6.04	units	100.7	90	110			
WG262229LCSW9	LCSW	04/14/09 21:12	PCN31552	6		6.04	units	100.7	90	110			
L75194-03DUP	DUP	04/15/09 1:08			8.7	8.7	units				0	20	
WG262229LCSW12	LCSW	04/15/09 1:39	PCN31552	6		6.05	units	100.8	90	110			
WG262229LCSW15	LCSW	04/15/09 5:27	PCN31552	6		6.07	units	101.2	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	20		20.07	mg/L	100.4	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.9	0.9			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	99.76186		101.87	mg/L	102.1	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	99.76186	4	108.7	mg/L	104.9	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	99.76186	4	112.87	mg/L	109.1	85	115	3.76	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	20		19.4	mg/L	97	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.9	0.9			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	99.76186		96.98	mg/L	97.2	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	99.76186	6.6	108.11	mg/L	101.8	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	99.76186	6.6	105.64	mg/L	99.3	85	115	2.31	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262119													
WG262119PBW	PBW	04/10/09 16:30				U	mg/L		-20	20			
WG262119LCSW	LCSW	04/10/09 16:31	PCN31923	260		238	mg/L	91.5	80	120			
L75193-03DUP	DUP	04/10/09 16:45			3060	3048	mg/L				0.4	20	
L75228-05DUP	DUP	04/10/09 16:59			7320	7220	mg/L				1.4	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262322													
WG262322ICV	ICV	04/16/09 9:31	MS090326-1	.05		.05291	mg/L	105.8	90	110			
WG262322ICB	ICB	04/16/09 9:35				U	mg/L		-0.00022	0.00022			
WG262322LFB	LFB	04/16/09 9:43	MS090409-2	.05005		.05365	mg/L	107.2	85	115			
L75184-03AS	AS	04/16/09 9:59	MS090409-2	.1001	.0011	.10506	mg/L	103.9	70	130			
L75184-03ASD	ASD	04/16/09 10:03	MS090409-2	.1001	.0011	.10388	mg/L	102.7	70	130	1.13	20	
L75193-04AS	AS	04/16/09 10:46	MS090409-2	.1001	.0059	.10936	mg/L	103.4	70	130			
L75193-04ASD	ASD	04/16/09 10:50	MS090409-2	.1001	.0059	.11152	mg/L	105.5	70	130	1.96	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	100		99.93	mg/L	99.9	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.9	0.9			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	98.21624		101.5	mg/L	103.3	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	98.21624	34.5	136.73	mg/L	104.1	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	98.21624	34.5	140.66	mg/L	108.1	85	115	2.83	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		97.15	mg/L	97.2	95	105			
WG262053ICV	ICV	04/10/09 19:04	II090115-1	100		96.6	mg/L	96.6	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.9	0.9			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-6	6			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	98.21624		96	mg/L	97.7	85	115			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	98.21624		96.51	mg/L	98.3	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	98.21624	317	396.53	mg/L	81	85	115			M2
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	98.21624	317	390.56	mg/L	74.9	85	115	1.52	20	M2

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262220													
WG262220PBW	PBW	04/14/09 10:44				U	mg/L		-30	30			
WG262220LCSW	LCSW	04/14/09 10:53	WC080910-2	100		100	mg/L	100	80	120			
L75217-02DUP	DUP	04/14/09 12:43			290	300	mg/L				3.4	20	
WG262419													
WG262419PBW	PBW	04/17/09 11:45				U	mg/L		-30	30			
WG262419LCSW	LCSW	04/17/09 11:47	WC080910-2	100		109	mg/L	109	80	120			
L75289-08DUP	DUP	04/17/09 12:11			100	106	mg/L				5.8	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05061	mg/L	101.2	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.0501		.04763	mg/L	95.1	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1002	U	.09534	mg/L	95.1	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1002	U	.09414	mg/L	94	70	130	1.27	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.1002	U	.09304	mg/L	92.9	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.1002	U	.09458	mg/L	94.4	70	130	1.64	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

Project ID: OJ09LE

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262250													
WG262250ICV	ICV	04/15/09 5:02	MS090326-1	.05		.05208	mg/L	104.2	90	110			
WG262250ICB	ICB	04/15/09 5:08				U	mg/L		-0.00022	0.00022			
WG262250LFB	LFB	04/15/09 5:14	MS090409-2	.05		.0501	mg/L	100.2	85	115			
L75184-03AS	AS	04/15/09 5:37	MS090409-2	.1	.0249	.1308	mg/L	105.9	70	130			
L75184-03ASD	ASD	04/15/09 5:42	MS090409-2	.1	.0249	.1299	mg/L	105	70	130	0.69	20	
L75193-04AS	AS	04/15/09 6:45	MS090409-2	.1	.0093	.11196	mg/L	102.7	70	130			
L75193-04ASD	ASD	04/15/09 6:51	MS090409-2	.1	.0093	.11462	mg/L	105.3	70	130	2.35	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262103													
WG262103ICV	ICV	04/10/09 17:08	II090115-1	2		1.942	mg/L	97.1	95	105			
WG262103ICB	ICB	04/10/09 17:11				U	mg/L		-0.03	0.03			
WG262103LFB	LFB	04/10/09 17:24	II090408-2	.5		.53	mg/L	106	85	115			
L75193-02AS	AS	04/10/09 17:37	II090408-2	.5	U	.529	mg/L	105.8	85	115			
L75193-02ASD	ASD	04/10/09 17:41	II090408-2	.5	U	.543	mg/L	108.6	85	115	2.61	20	
WG262053													
WG262053ICV	ICV	04/10/09 19:04	II090115-1	2		1.929	mg/L	96.5	95	105			
WG262053ICB	ICB	04/10/09 19:08				U	mg/L		-0.03	0.03			
WG262053LFB	LFB	04/10/09 19:21	II090313-2	.5		.555	mg/L	111	85	115			
L75188-04AS	AS	04/10/09 20:13	II090313-2	.5	.4	.897	mg/L	99.4	85	115			
L75188-04ASD	ASD	04/10/09 20:17	II090313-2	.5	.4	.878	mg/L	95.6	85	115	2.14	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75193***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75193-01	WG262053	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.
		Magnesium, 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.
		Sodium, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262453	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).
	WG262278	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).
L75193-02	WG262453	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).
	WG262278	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).
L75193-03	WG262453	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).
	WG262278	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).
L75193-04	WG262453	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).
	WG262278	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).

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75193
Date Received: 4/9/2009
Received By:
Date Printed: 4/9/2009

Receipt Verification

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

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

N/A

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2196	5.4	13

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75193
Date Received: 4/9/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75193-01	MH-30		Y		Y							
L75193-02	PZ-7		Y		Y							
L75193-03	20090407DUPA		Y		Y							
L75193-04	PZ-8		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

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

L7593

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson
Company: HydroGeoChem
E-mail: dans@hginc.com
Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ09LE
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Ambient -TB							
MH-30	04/07/09 09:25	GW	5	x							
PZ-7	04/06/09 11:00	GW	5	x							
20090407DUPA	04/07/09	GW	5	x							
PZ-8	04/08/09 09:45	GW	5	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 Dan Simpson contains only "SO4" results with QC Summary.

Please generate a third report containing "VRP Suite" Results with QC Summary and send to Rick Smith of URS.
(Rick_Smith@URSCorp.com)
UPS Tracking #1Z 867 7E4 23 1000 5896

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-8-09 15:00	CKT	4/9/09 1033

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

April 30, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75341– **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 17, 2009. This project was assigned to ACZ's project number, L75341. 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, version 12.0. The enclosed results relate only to the samples received under L75341. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-13A

ACZ Sample ID: ***L75341-01***
Date Sampled: *04/15/09 13:37*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1650		*	mg/L	50	300	04/22/09 10:12	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-13B

ACZ Sample ID: ***L75341-02***
Date Sampled: *04/15/09 12:52*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1030		*	mg/L	50	300	04/22/09 10:12	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-13C

ACZ Sample ID: ***L75341-03***
Date Sampled: *04/15/09 13:40*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	42		*	mg/L	5	30	04/22/09 9:48	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-25A

ACZ Sample ID: ***L75341-04***
Date Sampled: *04/15/09 09:41*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	4	B	*	mg/L	1	5	04/22/09 9:41	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-25B

ACZ Sample ID: ***L75341-05***
Date Sampled: *04/15/09 09:08*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	04/22/09 10:09	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-25C

ACZ Sample ID: ***L75341-06***
Date Sampled: *04/15/09 09:45*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1270		*	mg/L	50	300	04/22/09 10:12	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-10

ACZ Sample ID: ***L75341-07***
Date Sampled: *04/14/09 13:45*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1260		*	mg/L	50	300	04/22/09 10:12	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: BW-4

ACZ Sample ID: ***L75341-08***
Date Sampled: *04/15/09 13:30*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	2000			mg/L	50	250	04/22/09 15:48	brd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75341***

Project ID: OJ09LE

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262473													
WG262473PBW1	PBW	04/20/09 13:37				U	mg/L		-20	20			
WG262473LCSW2	LCSW	04/20/09 13:57	WC090330-1	820.0001		892.7	mg/L	108.9	90	110			
WG262473PBW2	PBW	04/20/09 17:37				U	mg/L		-20	20			
WG262473LCSW5	LCSW	04/20/09 17:56	WC090330-1	820.0001		787.2	mg/L	96	90	110			
WG262473PBW3	PBW	04/20/09 23:07				U	mg/L		-20	20			
WG262473LCSW8	LCSW	04/20/09 23:27	WC090330-1	820.0001		814.4	mg/L	99.3	90	110			
WG262473PBW4	PBW	04/21/09 3:39				U	mg/L		-20	20			
WG262473LCSW11	LCSW	04/21/09 3:59	WC090330-1	820.0001		835.9	mg/L	101.9	90	110			
L75351-01DUP	DUP	04/21/09 8:40			132	129.7	mg/L				1.8	20	
WG262473LCSW14	LCSW	04/21/09 9:01	WC090330-1	820.0001		850.7	mg/L	103.7	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		1.961	mg/L	98.1	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.09	0.09			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	1		1.038	mg/L	103.8	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	1	U	1.052	mg/L	105.2	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	1	U	1.036	mg/L	103.6	85	115	1.53	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	1	U	1.03	mg/L	103	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	1	U	1.068	mg/L	106.8	85	115	3.62	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.02		.01953	mg/L	97.7	90	110			
WG262601ICB	ICB	04/22/09 20:41				U	mg/L		-0.00088	0.00088			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.01		.01055	mg/L	105.5	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.01	U	.01023	mg/L	102.3	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.01	U	.01032	mg/L	103.2	70	130	0.88	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.01	U	.01004	mg/L	100.4	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.01	U	.01014	mg/L	101.4	70	130	0.99	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.05347	mg/L	106.9	90	110			
WG262601ICB	ICB	04/22/09 20:41				U	mg/L		-0.0011	0.0011			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.05005		.05023	mg/L	100.4	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.05005	.0067	.05657	mg/L	99.6	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.05005	.0067	.0554	mg/L	97.3	70	130	2.09	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.05005	.0023	.05484	mg/L	105	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.05005	.0023	.05444	mg/L	104.2	70	130	0.73	20	

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Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		2.0232	mg/L	101.2	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.009	0.009			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.5352	mg/L	107	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	.044	.581	mg/L	107.4	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	.044	.582	mg/L	107.6	85	115	0.17	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	.06	.5905	mg/L	106.1	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	.06	.6033	mg/L	108.7	85	115	2.14	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.05092	mg/L	101.8	90	110			
WG262601ICB	ICB	04/22/09 20:41				.00011	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.05005		.05052	mg/L	100.9	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.05005	U	.04981	mg/L	99.5	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.05005	U	.04943	mg/L	98.8	70	130	0.77	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.05005	U	.0498	mg/L	99.5	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.05005	U	.04896	mg/L	97.8	70	130	1.7	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.05109	mg/L	102.2	90	110			
WG262601ICB	ICB	04/22/09 20:41				.0001	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.05		.05011	mg/L	100.2	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.05	U	.04927	mg/L	98.5	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.05	U	.04877	mg/L	97.5	70	130	1.02	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.05	U	.04565	mg/L	91.3	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.05	U	.04521	mg/L	90.4	70	130	0.97	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	100		100.75	mg/L	100.8	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.6	0.6			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	67.97008		73.07	mg/L	107.5	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	67.97008	87.2	156.14	mg/L	101.4	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	67.97008	87.2	155.88	mg/L	101	85	115	0.17	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	67.97008	520	566.57	mg/L	68.5	85	115			M3
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	67.97008	520	576.17	mg/L	82.6	85	115	1.68	20	M3

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Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262744													
WG262744ICB	ICB	04/24/09 8:54				U	mg/L		-3	3			
WG262744ICV	ICV	04/24/09 8:54	WI090121-2	54.835		57.6	mg/L	105	90	110			
WG262744LFB1	LFB	04/24/09 14:05	WI090309-3	30		32.5	mg/L	108.3	90	110			
L75328-06AS	AS	04/24/09 14:07	WI090309-3	30	U	36.3	mg/L	121	90	110			M1
L75328-07DUP	DUP	04/24/09 14:07			5	4.6	mg/L				8.3	20	RA
WG262744LFB2	LFB	04/24/09 14:09	WI090309-3	30		32.5	mg/L	108.3	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		1.999	mg/L	100	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.03	0.03			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.555	mg/L	111	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	U	.559	mg/L	111.8	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	U	.563	mg/L	112.6	85	115	0.71	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	U	.564	mg/L	112.8	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	U	.583	mg/L	116.6	85	115	3.31	20	MA

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2.002		1.939	mg/L	96.9	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.03	0.03			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.538	mg/L	107.6	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	U	.544	mg/L	108.8	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	U	.525	mg/L	105	85	115	3.55	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	U	.533	mg/L	106.6	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	U	.552	mg/L	110.4	85	115	3.5	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262473													
WG262473LCSW1	LCSW	04/20/09 13:39	PCN31856	1408.8		1396	umhos/cm	99.1	90	110			
WG262473LCSW4	LCSW	04/20/09 17:38	PCN31856	1408.8		1399	umhos/cm	99.3	90	110			
WG262473LCSW7	LCSW	04/20/09 23:09	PCN31856	1408.8		1398	umhos/cm	99.2	90	110			
WG262473LCSW10	LCSW	04/21/09 3:41	PCN31856	1408.8		1364	umhos/cm	96.8	90	110			
L75351-01DUP	DUP	04/21/09 8:40			1480	1483	umhos/cm				0.2	20	
WG262473LCSW13	LCSW	04/21/09 8:42	PCN31856	1408.8		1341	umhos/cm	95.2	90	110			

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Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		1.979	mg/L	99	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.03	0.03			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.544	mg/L	108.8	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	.01	.553	mg/L	108.6	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	.01	.546	mg/L	107.2	85	115	1.27	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	U	.524	mg/L	104.8	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	U	.534	mg/L	106.8	85	115	1.89	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262814													
WG262814ICV	ICV	04/27/09 16:44	WI090422-2	.3		.2728	mg/L	90.9	90	110			
WG262814ICB	ICB	04/27/09 16:45				U	mg/L		-0.009	0.009			
L75308-02DUP	DUP	04/27/09 16:51			U	U	mg/L				0	20	RA
WG262771LFB	LFB	04/27/09 17:11	WI090422-7	.2		.183	mg/L	91.5	90	110			
WG262771LRB	LRB	04/27/09 18:27				U	mg/L		-0.006	0.006			
L75308-04LFM	LFM	04/27/09 18:42	WI090422-7	.2	14.7	15.2	mg/L	250	90	110			M3
WG262771LRB	LRB	04/27/09 18:46				U	mg/L		-0.006	0.006			
WG262814ICV1	ICV	04/28/09 11:36	WI090422-2	.3		.2712	mg/L	90.4	90	110			
WG262814ICV2	ICV	04/28/09 11:51	WI090422-2	.3		.2725	mg/L	90.8	90	110			
WG262814ICB1	ICB	04/28/09 11:52				U	mg/L		-0.009	0.009			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262512													
WG262512ICV	ICV	04/21/09 14:12	WC090414-1	2		1.9	mg/L	95	95	105			
WG262512ICB	ICB	04/21/09 14:20				U	mg/L		-0.3	0.3			
WG262512LFB1	LFB	04/21/09 14:28	WC090302-4	5		4.56	mg/L	91.2	90	110			
L75333-01AS	AS	04/21/09 16:03	WC090302-4	5	.1	4.58	mg/L	89.6	90	110			
L75333-01DUP	DUP	04/21/09 16:07			.1	.16	mg/L				46.2	20	RA
WG262512LFB2	LFB	04/22/09 9:56	WC090302-4	5		5.1	mg/L	102	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262596													
WG262596ICV	ICV	04/22/09 19:26	II090115-1	2		2.012	mg/L	100.6	95	105			
WG262596ICB	ICB	04/22/09 19:30				U	mg/L		-0.06	0.06			
WG262596LFB	LFB	04/22/09 19:43	II090422-2	1		1.051	mg/L	105.1	85	115			
L75227-05AS	AS	04/22/09 19:53	II090422-2	1	.03	1.038	mg/L	100.8	85	115			
L75227-05ASD	ASD	04/22/09 19:57	II090422-2	1	.03	1.068	mg/L	103.8	85	115	2.85	20	

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Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.04983	mg/L	99.7	90	110			
WG262601ICB	ICB	04/22/09 20:41				.00017	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.05005		.0478	mg/L	95.5	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.05005	U	.04821	mg/L	96.3	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.05005	U	.04763	mg/L	95.2	70	130	1.21	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.05005	.0017	.05054	mg/L	97.6	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.05005	.0017	.0507	mg/L	97.9	70	130	0.32	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	100		101.49	mg/L	101.5	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.6	0.6			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	49.96908		52.44	mg/L	104.9	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	49.96908	16.3	70.92	mg/L	109.3	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	49.96908	16.3	70.46	mg/L	108.4	85	115	0.65	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	49.96908	128	180.57	mg/L	105.2	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	49.96908	128	183.89	mg/L	111.8	85	115	1.82	20	
WG262519													
WG262519ICV	ICV	04/21/09 16:38	II090115-1	100		99.19	mg/L	99.2	95	105			
WG262519ICB	ICB	04/21/09 16:41				U	mg/L		-0.6	0.6			
WG262519LFB	LFB	04/21/09 16:54	II090408-2	49.96908		50.46	mg/L	101	85	115			
L75297-01AS	AS	04/21/09 17:01	II090408-2	49.96908	1.9	54.6	mg/L	105.5	85	115			
L75297-01ASD	ASD	04/21/09 17:04	II090408-2	49.96908	1.9	53.12	mg/L	102.5	85	115	2.75	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		1.965	mg/L	98.3	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.015	0.015			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.5565	mg/L	111.3	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	.184	.7473	mg/L	112.7	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	.184	.7393	mg/L	111.1	85	115	1.08	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	.04	.6074	mg/L	113.5	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	.04	.624	mg/L	116.8	85	115	2.7	20	MA

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262389													
WG262389ICV	ICV	04/17/09 15:43	II090325-1	.005		.0052	mg/L	104	90	110			
WG262389ICB	ICB	04/17/09 15:46				U	mg/L		-0.0006	0.0006			
WG262431													
WG262431LRB	LRB	04/17/09 17:22				U	mg/L		-0.00044	0.00044			
WG262431LFB	LFB	04/17/09 17:24	II090407-2	.002		.00196	mg/L	98	85	115			
L75328-03LFM	LFM	04/17/09 18:00	II090407-2	.002	U	.00201	mg/L	100.5	85	115			
L75328-03LFMD	LFMD	04/17/09 18:02	II090407-2	.002	U	.002	mg/L	100	85	115	0.5	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75341***

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Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		2.057	mg/L	102.9	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.03	0.03			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.554	mg/L	110.8	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	U	.571	mg/L	114.2	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	U	.579	mg/L	115.8	85	115	1.39	20	MA
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	U	.58	mg/L	116	85	115			M1
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	U	.585	mg/L	117	85	115	0.86	20	M1

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2.004		1.915	mg/L	95.6	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.03	0.03			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.537	mg/L	107.4	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	U	.541	mg/L	108.2	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	U	.535	mg/L	107	85	115	1.12	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	U	.551	mg/L	110.2	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	U	.559	mg/L	111.8	85	115	1.44	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
WG262690													
WG262690ICV	ICV	04/23/09 21:30	WI090318-4	2.416		2.255	mg/L	93.3	90	110			
WG262690ICB	ICB	04/23/09 21:31				U	mg/L		-0.06	0.06			
WG262690LFB1	LFB	04/23/09 21:32	WI090317-8	2		1.843	mg/L	92.2	90	110			
L75227-01AS	AS	04/23/09 21:35	WI090317-8	2	U	1.862	mg/L	93.1	90	110			
L75341-05AS	AS	04/23/09 21:55	WI090317-8	2	1.71	3.517	mg/L	90.4	90	110			
L75341-06DUP	DUP	04/23/09 21:58			1.6	1.6	mg/L				0	20	
L75227-02DUP	DUP	04/23/09 22:25			U	U	mg/L				0	20	RA
WG262690LFB2	LFB	04/23/09 22:32	WI090317-8	2		1.922	mg/L	96.1	90	110			

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262473													
WG262473LCSW3	LCSW	04/20/09 14:00	PCN31552	6		6.05	units	100.8	90	110			
WG262473LCSW6	LCSW	04/20/09 18:00	PCN31552	6		6.14	units	102.3	90	110			
WG262473LCSW9	LCSW	04/20/09 23:31	PCN31552	6		6.19	units	103.2	90	110			
WG262473LCSW12	LCSW	04/21/09 4:03	PCN31552	6		6.31	units	105.2	90	110			
L75351-01DUP	DUP	04/21/09 8:40			8.6	8.62	units				0.2	20	
WG262473LCSW15	LCSW	04/21/09 9:05	PCN31552	6		6.37	units	106.2	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75341***

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Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	20		20.01	mg/L	100.1	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.9	0.9			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	99.76186		102.21	mg/L	102.5	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	99.76186	3.1	109.07	mg/L	106.2	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	99.76186	3.1	109.01	mg/L	106.2	85	115	0.06	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	99.76186	13.1	123.13	mg/L	110.3	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	99.76186	13.1	124.84	mg/L	112	85	115	1.38	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262440													
WG262440PBW	PBW	04/17/09 16:00				U	mg/L		-20	20			
WG262440LCSW	LCSW	04/17/09 16:02	PCN31923	260		258	mg/L	99.2	80	120			
L75341-01DUP	DUP	04/17/09 16:31			2980	3016	mg/L				1.2	20	
L75356-02DUP	DUP	04/17/09 17:00			80	74	mg/L				7.8	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.0511	mg/L	102.2	90	110			
WG262601ICB	ICB	04/22/09 20:41				.00015	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.05005		.0479	mg/L	95.7	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.05005	U	.04909	mg/L	98.1	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.05005	U	.04766	mg/L	95.2	70	130	2.96	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.05005	.0153	.07299	mg/L	115.3	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.05005	.0153	.0737	mg/L	116.7	70	130	0.97	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	100		101.18	mg/L	101.2	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.9	0.9			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	98.21624		102.17	mg/L	104	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	98.21624	31.2	134.1	mg/L	104.8	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	98.21624	31.2	134.13	mg/L	104.8	85	115	0.02	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	98.21624	110	207.57	mg/L	99.3	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	98.21624	110	210.86	mg/L	102.7	85	115	1.57	20	

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Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262494													
WG262494ICB	ICB	04/22/09 9:13				U	mg/L		-3	3			
WG262494ICV	ICV	04/22/09 9:13	WI090422-9	20		20.2	mg/L	101	90	110			
WG262494LFB	LFB	04/22/09 9:39	WI081015-3	10		10	mg/L	100	90	110			
L75328-02DUP	DUP	04/22/09 9:39			22	21.8	mg/L				0.9	20	
L75328-03AS	AS	04/22/09 9:39	WI081015-3	10	29	36.1	mg/L	71	90	110			M2
L75341-04DUP	DUP	04/22/09 9:41			4	9.1	mg/L				77.9	20	RA
L75341-05AS	AS	04/22/09 10:11	SO4TURB10	10	1600	1630	mg/L	300	90	110			M3

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262607													
WG262607PBW	PBW	04/22/09 14:30				U	mg/L		-30	30			
WG262607LCSW	LCSW	04/22/09 14:49	WC080910-2	100		107	mg/L	107	80	120			
L75390-01DUP	DUP	04/22/09 18:24			610	589	mg/L				3.5	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.051	mg/L	102	90	110			
WG262601ICB	ICB	04/22/09 20:41				.0001	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.0501		.04762	mg/L	95	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.0501	U	.04834	mg/L	96.5	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.0501	U	.04786	mg/L	95.5	70	130	1	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.0501	U	.04962	mg/L	99	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.0501	U	.04976	mg/L	99.3	70	130	0.28	20	

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.04925	mg/L	98.5	90	110			
WG262601ICB	ICB	04/22/09 20:41				U	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.05		.04707	mg/L	94.1	85	115			
L75227-05AS	AS	04/22/09 21:06	MS090409-2	.05	.0005	.05017	mg/L	99.3	70	130			
L75227-05ASD	ASD	04/22/09 21:11	MS090409-2	.05	.0005	.0493	mg/L	97.6	70	130	1.75	20	
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.05	.416	.4648	mg/L	97.6	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.05	.416	.4706	mg/L	109.2	70	130	1.24	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262481													
WG262481ICV	ICV	04/20/09 23:27	II090115-1	2		1.959	mg/L	98	95	105			
WG262481ICB	ICB	04/20/09 23:31				U	mg/L		-0.03	0.03			
WG262481LFB	LFB	04/20/09 23:43	II090408-2	.5		.557	mg/L	111.4	85	115			
L75227-05AS	AS	04/21/09 0:01	II090408-2	.5	U	.557	mg/L	111.4	85	115			
L75227-05ASD	ASD	04/21/09 0:04	II090408-2	.5	U	.563	mg/L	112.6	85	115	1.07	20	
L75341-05AS	AS	04/21/09 0:31	II090408-2	.5	1.48	1.98	mg/L	100	85	115			
L75341-05ASD	ASD	04/21/09 0:34	II090408-2	.5	1.48	2.026	mg/L	109.2	85	115	2.3	20	

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75341-01	WG262512	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).
	WG262690	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75341-02	WG262481	Molybdenum, 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.
	WG262512	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).
	WG262690	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75341-03	WG262481	Molybdenum, 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.
	WG262512	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).
	WG262690	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75341-04	WG262481	Molybdenum, 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.
	WG262512	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).
	WG262690	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75341-05	WG262481	Chromium, 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.
		Molybdenum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262512	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).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75341-06	WG262481	Chromium, 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.
		Molybdenum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262512	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).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75341-07	WG262481	Chromium, 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.
		Molybdenum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262512	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).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75341-08	WG262481	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.
		Chromium, 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.
		Manganese, 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.
		Molybdenum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG262744	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG262814	Cyanide, total	M335.4 - Colorimetric w/ distillation	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.
			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).
	WG262512	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).
	WG262440	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			SM2540C	ZO	Concentration is based on a final residue greater than 200 mg.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75341
Date Received: 4/17/2009
Received By: lcp
Date Printed: 4/20/2009

Receipt Verification

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

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

No Cyanide Trip Blank.

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

The client was not contacted.

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA8253		4.8	14

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75341
Date Received: 4/17/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75341-01	MH-13A		Y		Y							
L75341-02	MH-13B		Y		Y							
L75341-03	MH-13C		Y		Y							
L75341-04	MH-25A		Y		Y							
L75341-05	MH-25B		Y		Y							
L75341-06	MH-25C		Y		Y							
L75341-07	MH-10		Y		Y							
L75341-08	BW-4		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: lcp

L75341

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ09LE
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly	Ambient-TB						
MH-13A	4/15/09 13:37	GW	3	x							
MH-13B	4/15/09 12:52	GW	3	x							
MH-13C	4/15/09 13:40	GW	3	x							
MH-25A	4/15/09 09:41	GW	3	x							
MH-25B	4/15/09 09:08	GW	3	x							
MH-25C	4/15/09 09:45	GW	3	x							
MH-10	4/14/09 13:45	GW	3	x							
BW-4	4/15/09 13:30	GW	5		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 Dan Simpson contains only "SO4" results with QC Summary.

Please generate a third report containing "VRP Suite" Results with QC Summary and send to Rick Smith of URS.
(Rick_Smith@URSCorp.com)
UPS Tracking # 1Z 867 7E4 23 1000 5867

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Aaron Hilshorst	04/16/09 15:00	[illegible]	4-17-09 11:38

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

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

Analytical Report

April 23, 2009

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

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

cc: Dan Simpson

Project ID: OJ09LE
ACZ Project ID: L75352

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 17, 2009. This project has been assigned to ACZ's project number, L75352. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L75352. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after May 23, 2009. 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.

Sue Webber has reviewed and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: ESP-1

ACZ Sample ID: ***L75352-01***
Date Sampled: *04/16/09 10:11*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	130			mg/L	3	10	04/22/09 21:41	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: ESP-2

ACZ Sample ID: ***L75352-02***
Date Sampled: *04/16/09 09:20*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	28.2			mg/L	0.5	3	04/22/09 10:36	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: ESP-3

ACZ Sample ID: ***L75352-03***
Date Sampled: *04/16/09 11:51*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	35.3			mg/L	0.5	3	04/22/09 10:57	aml

Arizona license number: AZ0102

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: ESP-4

ACZ Sample ID: ***L75352-04***
Date Sampled: *04/16/09 11:08*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	521			mg/L	5	30	04/22/09 22:02	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita
Project ID: OJ09LE

ACZ Project ID: ***L75352***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262539													
WG262539ICV	ICV	04/15/09 11:40	WI090316-1	50		49.82	mg/L	99.6	90	110			
WG262539ICB	ICB	04/15/09 12:01				U	mg/L		-1.5	1.5			
WG262539ICV1	ICV	04/22/09 0:24	WI090316-1	50		52.19	mg/L	104.4	90	110			
WG262539ICB1	ICB	04/22/09 0:45				U	mg/L		-1.5	1.5			
WG262539LFB	LFB	04/22/09 1:27	WI081125-2	30		28.76	mg/L	95.9	90	110			
L75350-04AS	AS	04/22/09 7:05	WI081125-2	600	930	1472	mg/L	90.3	90	110			
L75350-04DUP	DUP	04/22/09 7:26			930	1015	mg/L				8.7	20	
WG262539ICV2	ICV	04/22/09 20:16	WI090316-1	50		53.06	mg/L	106.1	90	110			
WG262539ICB2	ICB	04/22/09 20:37				U	mg/L		-1.5	1.5			

ACZ Laboratories, Inc.
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Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75352***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75352
Date Received: 4/17/2009
Received By:
Date Printed: 4/17/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8255	6	13

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75352
Date Received: 4/17/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75352-01	ESP-1									X		
L75352-02	ESP-2									X		
L75352-03	ESP-3									X		
L75352-04	ESP-4									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L75352

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
ESP-1	4/16/09 10:11	GW	1	X							
ESP-2	4/16/09 09:20	GW	1	X							
ESP-3	4/16/09 11:51	GW	1	X							
ESP-4	4/16/09 11:08	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 5850

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[illegible]	4-16-09 15:00	CRT	4/17/09 1141

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

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

Analytical Report

April 27, 2009

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

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

Project ID: OJ09LE
ACZ Project ID: L75353

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 17, 2009. This project has been assigned to ACZ's project number, L75353. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L75353. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after May 27, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: DUP20090415A

ACZ Sample ID: ***L75353-05***
Date Sampled: *04/15/09 00:00*
Date Received: *04/17/09*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	04/22/09 23:05	erf
Arsenic, dissolved	M200.8 ICP-MS	0.0022			mg/L	0.0005	0.002	04/22/09 23:05	erf
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	04/22/09 23:05	erf
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	04/22/09 23:05	erf
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/20/09 22:03	aeh
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/20/09 22:03	aeh
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/20/09 22:03	aeh
Lead, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	04/22/09 23:05	erf
Magnesium, dissolved	M200.7 ICP	59.1			mg/L	0.2	1	04/20/09 22:03	aeh
Molybdenum, dissolved	M200.7 ICP		U	*	mg/L	0.01	0.05	04/20/09 22:03	aeh
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/20/09 22:03	aeh
Selenium, dissolved	M200.8 ICP-MS	0.0027			mg/L	0.0001	0.0005	04/22/09 23:05	erf
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	04/22/09 23:05	erf

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.1	B	*	mg/L	0.1	0.5	04/21/09 18:12	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.38			mg/L	0.02	0.1	04/23/09 22:33	pjb
Residue, Filterable (TDS) @180C	SM2540C	2040			mg/L	10	20	04/21/09 15:18	kah
Sulfate	375.4 - Turbidimetric	1100		*	mg/L	100	500	04/22/09 17:00	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75353***

Project ID: OJ09LE

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262494													
WG262494ICB	ICB	04/22/09 9:13				U	mg/L		-3	3			
WG262494ICV	ICV	04/22/09 9:13	WI090422-9	20		20.2	mg/L	101	90	110			
WG262494LFB	LFB	04/22/09 9:39	WI081015-3	10		10	mg/L	100	90	110			
L75341-04DUP	DUP	04/22/09 9:41			4	9.1	mg/L				77.9	20	RA
L75341-05AS	AS	04/22/09 10:11	SO4TURB10	10	1600	1630	mg/L	300	90	110			M3
WG262623													
WG262623ICB	ICB	04/22/09 9:13				U	mg/L		-3	3			
WG262623ICV	ICV	04/22/09 9:13	WI090422-9	20		20.2	mg/L	101	90	110			
WG262623LFB	LFB	04/22/09 16:15	WI081015-3	10		9.9	mg/L	99	90	110			
L75353-05DUP	DUP	04/22/09 17:00			1100	1090	mg/L				0.9	20	
L75257-02AS	AS	04/22/09 17:01	SO4TURB5	10	27	39.4	mg/L	124	90	110			M1

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262601													
WG262601ICV	ICV	04/22/09 20:36	MS090326-1	.05		.051	mg/L	102	90	110			
WG262601ICB	ICB	04/22/09 20:41				.0001	mg/L		-0.00022	0.00022			
WG262601LFB	LFB	04/22/09 20:51	MS090409-2	.0501		.04762	mg/L	95	85	115			
L75353-01AS	AS	04/22/09 22:40	MS090409-2	.0501	U	.04962	mg/L	99	70	130			
L75353-01ASD	ASD	04/22/09 22:45	MS090409-2	.0501	U	.04976	mg/L	99.3	70	130	0.28	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75353***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75353-01	WG262482	Molybdenum, 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.
	WG262512	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).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75353-02	WG262482	Molybdenum, 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.
	WG262512	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).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75353-03	WG262482	Molybdenum, 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.
	WG262512	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).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75353-04	WG262482	Molybdenum, 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.
	WG262512	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).
	WG262494	Sulfate	375.4 - 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.
			375.4 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75353-05	WG262482	Molybdenum, 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.
	WG262512	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).
	WG262623	Sulfate	375.4 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75353
Date Received: 4/17/2009
Received By:
Date Printed: 4/17/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8255	6	13

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75353
Date Received: 4/17/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75353-01	M-17		Y		Y							
L75353-02	M-19		Y		Y							
L75353-03	M-15		Y		Y							
L75353-04	M-16		Y		Y							
L75353-05	DUP20090415A		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

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

L753553

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

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

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

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

Are samples for CO DW Compliance Monitoring? YES ☐ NO ☐

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly							
M-17	04/14/09 10:38	GW	3	x							
M-19	04/14/09 15:00	GW	3	x							
M-15	04/15/09 11:15	GW	3	x							
M-16	04/15/09 11:28	GW	3	x							
DUP20090415A	04/15/09	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 1000 5850

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[illegible]	4-16-09 15:10	CKT	4/17/09 1141

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

May 11, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75451– **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 24, 2009. This project was assigned to ACZ's project number, L75451. 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, version 12.0. The enclosed results relate only to the samples received under L75451. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold Copper - Sierrita

May 08, 2009

Project ID: OJ09LE
ACZ Project ID: L75451

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 10 ground water samples from FMI Gold & Copper - Sierrita on April 24, 2009. 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 L75451. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Samples were received outside the EPA recommended temperature of 0-6 degrees C.

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.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-10

ACZ Sample ID: ***L75451-01***
Date Sampled: *04/20/09 11:30*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/08/09 11:52	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-11

ACZ Sample ID: ***L75451-02***
Date Sampled: *04/20/09 11:55*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/08/09 11:52	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-12

ACZ Sample ID: ***L75451-03***
Date Sampled: *04/20/09 12:15*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1500		*	mg/L	100	500	05/08/09 11:52	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-13

ACZ Sample ID: ***L75451-04***
Date Sampled: *04/20/09 12:25*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/08/09 11:52	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-14

ACZ Sample ID: ***L75451-05***
Date Sampled: *04/20/09 12:35*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/08/09 11:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-18

ACZ Sample ID: ***L75451-06***
Date Sampled: *04/20/09 13:45*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/08/09 11:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-21

ACZ Sample ID: ***L75451-07***
Date Sampled: *04/20/09 14:25*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/08/09 11:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-23

ACZ Sample ID: ***L75451-08***
Date Sampled: *04/20/09 11:15*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/08/09 11:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-8

ACZ Sample ID: ***L75451-09***
Date Sampled: *04/20/09 10:22*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/05/09 11:20	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: DUP20090420A

ACZ Sample ID: ***L75451-10***
Date Sampled: *04/20/09 00:00*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1500		*	mg/L	100	500	05/05/09 11:22	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75451***

Project ID: OJ09LE

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.02		.01946	mg/L	97.3	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.00088	0.00088			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.01		.01013	mg/L	101.3	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.05	U	.0501	mg/L	100.2	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.05	U	.0508	mg/L	101.6	70	130	1.39	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.1	.108	.2073	mg/L	99.3	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.1	.108	.2115	mg/L	103.5	70	130	2.01	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.05		.05363	mg/L	107.3	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.0011	0.0011			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.05005		.04944	mg/L	98.8	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.25025	U	.2471	mg/L	98.7	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.25025	U	.2454	mg/L	98.1	70	130	0.69	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.5005	U	.4729	mg/L	94.5	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.5005	U	.4859	mg/L	97.1	70	130	2.71	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.05		.05077	mg/L	101.5	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.00022	0.00022			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.05005		.0501	mg/L	100.1	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.25025	U	.23435	mg/L	93.6	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.25025	U	.2396	mg/L	95.7	70	130	2.22	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.5005	U	.478	mg/L	95.5	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.5005	U	.4899	mg/L	97.9	70	130	2.46	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.05		.05148	mg/L	103	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.00022	0.00022			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.05		.04941	mg/L	98.8	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.25	U	.24335	mg/L	97.3	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.25	U	.2416	mg/L	96.6	70	130	0.72	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.5	U	.4642	mg/L	92.8	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.5	U	.4712	mg/L	94.2	70	130	1.5	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75451***

Project ID: OJ09LE

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2		1.998	mg/L	99.9	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.491	mg/L	98.2	85	115			
L75446-01AS	AS	04/29/09 16:36	II090428-2	.5	U	.505	mg/L	101	85	115			
L75446-01ASD	ASD	04/29/09 16:39	II090428-2	.5	U	.503	mg/L	100.6	85	115	0.4	20	
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.536	mg/L	107.2	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.533	mg/L	106.6	85	115	0.56	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2.002		2.005	mg/L	100.1	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.494	mg/L	98.8	85	115			
L75446-01AS	AS	04/29/09 16:36	II090428-2	.5	U	.512	mg/L	102.4	85	115			
L75446-01ASD	ASD	04/29/09 16:39	II090428-2	.5	U	.515	mg/L	103	85	115	0.58	20	
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.524	mg/L	104.8	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.521	mg/L	104.2	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
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2		1.977	mg/L	98.9	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.485	mg/L	97	85	115			
L75446-01AS	AS	04/29/09 16:36	II090428-2	.5	U	.498	mg/L	99.6	85	115			
L75446-01ASD	ASD	04/29/09 16:39	II090428-2	.5	U	.498	mg/L	99.6	85	115	0	20	
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.51	mg/L	102	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.512	mg/L	102.4	85	115	0.39	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262890													
WG262890ICV	ICV	04/29/09 11:04	WC090424-9	2		1.9	mg/L	95	95	105			
WG262890ICB	ICB	04/29/09 11:12				U	mg/L		-0.3	0.3			
WG262890LFB1	LFB	04/29/09 11:20	WC090302-4	5		5.24	mg/L	104.8	90	110			
L75451-01AS	AS	04/29/09 12:39	WC090302-4	5	.2	4.77	mg/L	91.4	90	110			
L75451-01DUP	DUP	04/29/09 12:44			.2	.26	mg/L				26.1	20	RA
WG262890LFB2	LFB	04/29/09 13:37	WC090302-4	5		5.05	mg/L	101	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75451***

Project ID: OJ09LE

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.05		.04919	mg/L	98.4	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.00022	0.00022			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.05005		.04632	mg/L	92.5	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.25025	U	.2337	mg/L	93.4	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.25025	U	.23145	mg/L	92.5	70	130	0.97	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.5005	U	.4574	mg/L	91.4	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.5005	U	.4582	mg/L	91.5	70	130	0.17	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	100		101.33	mg/L	101.3	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.6	0.6			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	49.96908		48.74	mg/L	97.5	85	115			
L75446-01AS	AS	04/29/09 16:36	II090428-2	49.96908	28.4	79.16	mg/L	101.6	85	115			
L75446-01ASD	ASD	04/29/09 16:39	II090428-2	49.96908	28.4	79.93	mg/L	103.1	85	115	0.97	20	
L75454-01AS	AS	04/29/09 17:29	II090428-2	49.96908	3.1	56.71	mg/L	107.3	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	49.96908	3.1	56.76	mg/L	107.4	85	115	0.09	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2		2.069	mg/L	103.5	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.503	mg/L	100.6	85	115			
L75446-01AS	AS	04/29/09 16:36	II090428-2	.5	U	.528	mg/L	105.6	85	115			
L75446-01ASD	ASD	04/29/09 16:39	II090428-2	.5	U	.519	mg/L	103.8	85	115	1.72	20	
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.524	mg/L	104.8	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.532	mg/L	106.4	85	115	1.52	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2.004		1.937	mg/L	96.7	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.484	mg/L	96.8	85	115			
L75446-01AS	AS	04/29/09 16:36	II090428-2	.5	U	.496	mg/L	99.2	85	115			
L75446-01ASD	ASD	04/29/09 16:39	II090428-2	.5	U	.499	mg/L	99.8	85	115	0.6	20	
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.537	mg/L	107.4	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.542	mg/L	108.4	85	115	0.93	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75451***

Project ID: OJ09LE

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263070													
WG263070ICV	ICV	05/01/09 17:50	WI090318-4	2.416		2.401	mg/L	99.4	90	110			
WG263070ICB	ICB	05/01/09 17:52				U	mg/L		-0.06	0.06			
WG263070LFB1	LFB	05/01/09 17:56	WI090317-8	2		2.008	mg/L	100.4	90	110			
WG263070ICV1	ICV	05/01/09 18:44	WI090318-4	2.416		2.395	mg/L	99.1	90	110			
WG263070ICB1	ICB	05/01/09 18:45				U	mg/L		-0.06	0.06			
L75438-02AS	AS	05/01/09 18:54	WI090317-8	2	.63	2.619	mg/L	99.5	90	110			
L75438-03DUP	DUP	05/01/09 18:57			U	U	mg/L				0	20	RA
WG263070LFB2	LFB	05/01/09 19:13	WI090317-8	2		2.01	mg/L	100.5	90	110			
L75451-08DUP	DUP	05/01/09 19:23			.95	.942	mg/L				0.8	20	
L75451-07AS	AS	05/01/09 19:41	WI090317-8	6	2.14	8.225	mg/L	101.4	90	110			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262723													
WG262723PBW	PBW	04/24/09 11:20				U	mg/L		-20	20			
WG262723LCSW	LCSW	04/24/09 11:20	PCN31923	260		238	mg/L	91.5	80	120			
L75451-06DUP	DUP	04/24/09 11:39			2960	2962	mg/L				0.1	20	
WG262787													
WG262787PBW	PBW	04/27/09 13:45				U	mg/L		-20	20			
WG262787LCSW	LCSW	04/27/09 13:46	PCN31923	260		252	mg/L	96.9	80	120			
L75455-05DUP	DUP	04/27/09 14:00			2930	2916	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
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.05		.05286	mg/L	105.7	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.00022	0.00022			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.05005		.04578	mg/L	91.5	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.25025	U	.23125	mg/L	92.4	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.25025	U	.2295	mg/L	91.7	70	130	0.76	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.5005	.001	.4592	mg/L	91.5	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.5005	.001	.4786	mg/L	95.4	70	130	4.14	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75451***

Project ID: OJ09LE

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263116													
WG263116ICB	ICB	05/05/09 9:54				U	mg/L		-3	3			
WG263116ICV	ICV	05/05/09 9:54	WI090505-1	20		19.3	mg/L	96.5	90	110			
WG263116LFB1	LFB	05/05/09 11:13	WI090505-3	10		9.5	mg/L	95	90	110			
WG263116LFB2	LFB	05/05/09 11:16	WI090505-3	10		9	mg/L	90	90	110			
L75451-09DUP	DUP	05/05/09 11:22			1700	1640	mg/L				3.6	20	
L75451-10AS	AS	05/05/09 11:22	SO4TURB10	10	1500	1530	mg/L	300	90	110			M3
WG263312													
WG263312ICB	ICB	05/08/09 9:21				U	mg/L		-3	3			
WG263312ICV	ICV	05/08/09 9:21	WI090505-1	20		19.5	mg/L	97.5	90	110			
WG263312LFB	LFB	05/08/09 11:19	WI090505-3	10		9	mg/L	90	90	110			
L75389-02DUP	DUP	05/08/09 11:27			69	70.5	mg/L				2.2	20	
L75436-01AS	AS	05/08/09 11:27	SO4TURB5	10	97	107.3	mg/L	103	90	110			
L75482-01AS	AS	05/08/09 11:29	SO4TURB5	10	63	72.2	mg/L	92	90	110			
L75451-08DUP	DUP	05/08/09 11:55			1700	1560	mg/L				8.6	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262927													
WG262927ICV	ICV	04/30/09 6:45	MS090326-1	.05		.05084	mg/L	101.7	90	110			
WG262927ICB	ICB	04/30/09 6:50				U	mg/L		-0.00022	0.00022			
WG262927LFB	LFB	04/30/09 7:00	MS090409-2	.0501		.04625	mg/L	92.3	85	115			
L75337-03AS	AS	04/30/09 7:20	MS090409-2	.2505	U	.2344	mg/L	93.6	70	130			
L75337-03ASD	ASD	04/30/09 7:25	MS090409-2	.2505	U	.23285	mg/L	93	70	130	0.66	20	
L75475-03AS	AS	04/30/09 9:01	MS090409-2	.501	U	.4595	mg/L	91.7	70	130			
L75475-03ASD	ASD	04/30/09 9:06	MS090409-2	.501	U	.4625	mg/L	92.3	70	130	0.65	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75451***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75451-01	WG262890	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).
	WG263070	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75451-02	WG262890	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).
	WG263070	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75451-03	WG262890	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).
	WG263070	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75451-04	WG262890	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).
	WG263070	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75451-05	WG262890	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).
	WG263070	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75451-06	WG262890	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).
	WG263070	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L75451-07	WG262890	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).
L75451-08	WG262890	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).
L75451-09	WG262890	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).
	WG263116	Sulfate	375.4 - 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.
L75451-10	WG262927	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.
	WG262890	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).
	WG263116	Sulfate	375.4 - 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.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75451
Date Received: 4/24/2009
Received By:
Date Printed: 4/24/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2935	6.9	15

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75451
Date Received: 4/24/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75451-01	IW-10		Y		Y							
L75451-02	IW-11		Y		Y							
L75451-03	IW-12		Y		Y							
L75451-04	IW-13		Y		Y							
L75451-05	IW-14		Y		Y							
L75451-06	IW-18		Y		Y							
L75451-07	IW-21		Y		Y							
L75451-08	IW-23		Y		Y							
L75451-09	IW-8		Y		Y							
L75451-10	DUP20090420A		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L75451

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ09LE
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly							
IW-10	4/20/09 11:30	GW	3	x							
IW-11	4/20/09 11:55	GW	3	x							
IW-12	4/20/09 12:15	GW	3	x							
IW-13	4/20/09 12:25	GW	3	x							
IW-14	4/20/09 12:35	GW	3	x							
IW-18	4/20/09 13:45	GW	3	x							
IW-21	4/20/09 14:25	GW	3	x							
IW-23	4/20/09 11:15	GW	3	x							
IW-8	4/20/09 10:22	GW	3	x							
DUP20090420A	4/20/09	GW	3	x							

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

REMARKS

Copy of report to Dan Simpson contains only "SO4" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 6868

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[illegible]	4-23-09 17:00	CKT	4/24/09 842

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

May 08, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75455– **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 24, 2009. This project was assigned to ACZ's project number, L75455. 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, version 12.0. The enclosed results relate only to the samples received under L75455. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-1

ACZ Sample ID: ***L75455-01***
Date Sampled: *04/20/09 09:47*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	670		*	mg/L	50	300	05/06/09 12:47	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-15

ACZ Sample ID: ***L75455-02***
Date Sampled: *04/20/09 12:45*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/06/09 13:53	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-16

ACZ Sample ID: ***L75455-03***
Date Sampled: *04/20/09 13:15*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/06/09 13:53	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-17

ACZ Sample ID: ***L75455-04***
Date Sampled: *04/20/09 13:30*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/06/09 13:54	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-19

ACZ Sample ID: ***L75455-05***
Date Sampled: *04/20/09 13:55*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/06/09 13:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-20

ACZ Sample ID: ***L75455-06***
Date Sampled: *04/20/09 14:05*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1500		*	mg/L	100	500	05/06/09 13:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-22

ACZ Sample ID: ***L75455-07***
Date Sampled: *04/20/09 11:40*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/06/09 13:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-24

ACZ Sample ID: ***L75455-08***
Date Sampled: *04/20/09 10:52*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/06/09 13:56	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-2A

ACZ Sample ID: ***L75455-09***
Date Sampled: *04/20/09 09:57*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	54		*	mg/L	5	30	05/06/09 13:26	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-6A

ACZ Sample ID: ***L75455-10***
Date Sampled: *04/20/09 12:05*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/06/09 13:56	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: DUP20090420B

ACZ Sample ID: ***L75455-11***
Date Sampled: *04/20/09 09:47*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1700		*	mg/L	100	500	05/06/09 13:56	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75455***

Project ID: OJ09LE

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.02		.01863	mg/L	93.2	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00088	0.00088			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.01		.00987	mg/L	98.7	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.02	U	.0199	mg/L	99.5	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.02	U	.02028	mg/L	101.4	70	130	1.89	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.02	U	.01978	mg/L	98.9	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.02	U	.02008	mg/L	100.4	70	130	1.51	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.05456	mg/L	109.1	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.0011	0.0011			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04863	mg/L	97.2	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.1001	.006	.1076	mg/L	101.5	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.1001	.006	.1086	mg/L	102.5	70	130	0.93	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	.003	.1072	mg/L	104.1	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	.003	.1082	mg/L	105.1	70	130	0.93	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.04966	mg/L	99.3	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04778	mg/L	95.5	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.1001	U	.09572	mg/L	95.6	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.1001	U	.09648	mg/L	96.4	70	130	0.79	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	U	.1102	mg/L	110.1	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	U	.11188	mg/L	111.8	70	130	1.51	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.0507	mg/L	101.4	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05		.04822	mg/L	96.4	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.1	U	.09228	mg/L	92.3	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.1	U	.09352	mg/L	93.5	70	130	1.33	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1	U	.09152	mg/L	91.5	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1	U	.09244	mg/L	92.4	70	130	1	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75455***

Project ID: OJ09LE

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2		1.998	mg/L	99.9	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.491	mg/L	98.2	85	115			
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.536	mg/L	107.2	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.533	mg/L	106.6	85	115	0.56	20	
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2		2	mg/L	100	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.507	mg/L	101.4	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.507	mg/L	101.4	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.505	mg/L	101	85	115	0.4	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2.002		2.005	mg/L	100.1	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.494	mg/L	98.8	85	115			
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.524	mg/L	104.8	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.521	mg/L	104.2	85	115	0.57	20	
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2.002		1.946	mg/L	97.2	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.488	mg/L	97.6	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.49	mg/L	98	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.492	mg/L	98.4	85	115	0.41	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2		1.977	mg/L	98.9	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.485	mg/L	97	85	115			
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.51	mg/L	102	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.512	mg/L	102.4	85	115	0.39	20	
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2		1.943	mg/L	97.2	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.49	mg/L	98	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.492	mg/L	98.4	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.499	mg/L	99.8	85	115	1.41	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75455***

Project ID: OJ09LE

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262890													
WG262890ICV	ICV	04/29/09 11:04	WC090424-9	2		1.9	mg/L	95	95	105			
WG262890ICB	ICB	04/29/09 11:12				U	mg/L		-0.3	0.3			
WG262890LFB1	LFB	04/29/09 11:20	WC090302-4	5		5.24	mg/L	104.8	90	110			
WG262890LFB2	LFB	04/29/09 13:37	WC090302-4	5		5.05	mg/L	101	90	110			
L75455-01AS	AS	04/29/09 13:43	WC090302-4	5	.3	5.07	mg/L	95.4	90	110			
L75455-01DUP	DUP	04/29/09 13:46			.3	.34	mg/L				12.5	20	RA
L75455-11AS	AS	04/29/09 15:05	WC090302-4	5	.2	4.88	mg/L	93.6	90	110			
L75455-11DUP	DUP	04/29/09 15:08			.2	.27	mg/L				29.8	20	RA

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.04966	mg/L	99.3	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04673	mg/L	93.4	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.1001	.002	.0963	mg/L	94.2	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.1001	.002	.09704	mg/L	94.9	70	130	0.77	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	U	.09376	mg/L	93.7	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	U	.09504	mg/L	94.9	70	130	1.36	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	100		101.33	mg/L	101.3	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.6	0.6			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	49.96908		48.74	mg/L	97.5	85	115			
L75454-01AS	AS	04/29/09 17:29	II090428-2	49.96908	3.1	56.71	mg/L	107.3	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	49.96908	3.1	56.76	mg/L	107.4	85	115	0.09	20	
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	100		100.74	mg/L	100.7	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.6	0.6			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	49.96908		48.91	mg/L	97.9	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	49.96908	9.2	58.26	mg/L	98.2	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	49.96908	9.2	58.48	mg/L	98.6	85	115	0.38	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75455***

Project ID: OJ09LE

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2		2.069	mg/L	103.5	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.503	mg/L	100.6	85	115			
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.524	mg/L	104.8	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.532	mg/L	106.4	85	115	1.52	20	
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2		2.048	mg/L	102.4	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.498	mg/L	99.6	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.497	mg/L	99.4	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.506	mg/L	101.2	85	115	1.79	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262934													
WG262934ICV	ICV	04/29/09 16:13	II090115-1	2.004		1.937	mg/L	96.7	95	105			
WG262934ICB	ICB	04/29/09 16:17				U	mg/L		-0.03	0.03			
WG262934LFB	LFB	04/29/09 16:30	II090428-2	.5		.484	mg/L	96.8	85	115			
L75454-01AS	AS	04/29/09 17:29	II090428-2	.5	U	.537	mg/L	107.4	85	115			
L75454-01ASD	ASD	04/29/09 17:33	II090428-2	.5	U	.542	mg/L	108.4	85	115	0.93	20	
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2.004		1.905	mg/L	95.1	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.476	mg/L	95.2	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.47	mg/L	94	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.477	mg/L	95.4	85	115	1.48	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
WG263070													
WG263070ICV	ICV	05/01/09 17:50	WI090318-4	2.416		2.401	mg/L	99.4	90	110			
WG263070ICB	ICB	05/01/09 17:52				U	mg/L		-0.06	0.06			
WG263070LFB1	LFB	05/01/09 17:56	WI090317-8	2		2.008	mg/L	100.4	90	110			
WG263070ICV1	ICV	05/01/09 18:44	WI090318-4	2.416		2.395	mg/L	99.1	90	110			
WG263070ICB1	ICB	05/01/09 18:45				U	mg/L		-0.06	0.06			
WG263070LFB2	LFB	05/01/09 19:13	WI090317-8	2		2.01	mg/L	100.5	90	110			
WG263071													
WG263071ICV	ICV	05/01/09 20:05	WI090318-4	2.416		2.42	mg/L	100.2	90	110			
WG263071ICB	ICB	05/01/09 20:06				U	mg/L		-0.06	0.06			
WG263071LFB1	LFB	05/01/09 20:08	WI090317-8	2		2.036	mg/L	101.8	90	110			
L75455-06DUP	DUP	05/01/09 20:13			2.19	2.194	mg/L				0.2	20	
WG263071LFB2	LFB	05/01/09 20:50	WI090317-8	2		2.028	mg/L	101.4	90	110			
L75459-07AS	AS	05/01/09 20:52	WI090317-8	2	.92	3.065	mg/L	107.3	90	110			
L75459-08DUP	DUP	05/01/09 20:55			.25	.259	mg/L				3.5	20	
L75455-05AS	AS	05/01/09 21:11	WI090317-8	2	1.8	3.7	mg/L	95	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75455***

Project ID: OJ09LE

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262787													
WG262787PBW	PBW	04/27/09 13:45				U	mg/L		-20	20			
WG262787LCSW	LCSW	04/27/09 13:46	PCN31923	260		252	mg/L	96.9	80	120			
L75455-05DUP	DUP	04/27/09 14:00			2930	2916	mg/L				0.5	20	
L75457-04DUP	DUP	04/27/09 14:14			2940	2930	mg/L				0.3	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.05283	mg/L	105.7	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04535	mg/L	90.6	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.1001	.0002	.10458	mg/L	104.3	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.1001	.0002	.10434	mg/L	104	70	130	0.23	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	.0004	.10094	mg/L	100.4	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	.0004	.10198	mg/L	101.5	70	130	1.03	20	

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263167													
WG263167ICB	ICB	05/06/09 10:39				U	mg/L		-3	3			
WG263167ICV	ICV	05/06/09 10:39	WI090505-1	20		19.7	mg/L	98.5	90	110			
WG263167LFB1	LFB	05/06/09 13:17	WI090505-3	10		9.2	mg/L	92	90	110			
WG263167LFB2	LFB	05/06/09 13:22	WI090505-3	10		9.4	mg/L	94	90	110			
L75455-02DUP	DUP	05/06/09 13:53			1600	1720	mg/L				7.2	20	
L75455-03AS	AS	05/06/09 13:53	SO4TURB10	10	1700	1720	mg/L	200	90	110			M3
WG263166													
WG263166ICB	ICB	05/06/09 10:39				U	mg/L		-3	3			
WG263166ICV	ICV	05/06/09 10:39	WI090505-1	20		19.7	mg/L	98.5	90	110			
WG263166LFB	LFB	05/06/09 11:05	WI090505-3	10		9.2	mg/L	92	90	110			
L75493-01DUP	DUP	05/06/09 14:41			31	30.9	mg/L				0.3	20	
L75501-01AS	AS	05/06/09 15:07	WI090505-3	10	17	27.1	mg/L	101	90	110			

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.0503	mg/L	100.6	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.0501		.04659	mg/L	93	85	115			
L75455-03AS	AS	05/04/09 22:26	MS090409-2	.1002	U	.09566	mg/L	95.5	70	130			
L75455-03ASD	ASD	05/04/09 22:31	MS090409-2	.1002	U	.09582	mg/L	95.6	70	130	0.17	20	
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1002	U	.09426	mg/L	94.1	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1002	U	.09506	mg/L	94.9	70	130	0.85	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75455***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75455-01	WG262890	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).
L75455-02	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-03	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-04	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-05	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-06	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-07	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-08	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-09	WG262890	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).
	WG263167	Sulfate	375.4 - 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: ***L75455***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75455-10	WG262890	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).
	WG263167	Sulfate	375.4 - 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.
L75455-11	WG262890	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).
	WG263167	Sulfate	375.4 - 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.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75455
Date Received: 4/24/2009
Received By:
Date Printed: 4/24/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8294	3.4	12

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75455
Date Received: 4/24/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75455-01	IW-1		Y		Y							
L75455-02	IW-15		Y		Y							
L75455-03	IW-16		Y		Y							
L75455-04	IW-17		Y		Y							
L75455-05	IW-19		Y		Y							
L75455-06	IW-20		Y		Y							
L75455-07	IW-22		Y		Y							
L75455-08	IW-24		Y		Y							
L75455-09	IW-2A		Y		Y							
L75455-10	IW-6A		Y		Y							
L75455-11	DUP20090420B		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L75455

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ09LE
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly							
IW-1	4/20/09 09:47	GW	3	X							
IW-15	4/20/09 12:45	GW	3	X							
IW-16	4/20/09 13:15	GW	3	X							
IW-17	4/20/09 13:30	GW	3	X							
IW-19	4/20/09 13:55	GW	3	X							
IW-20	4/20/09 14:05	GW	3	X							
IW-22	4/20/09 11:40	GW	3	X							
IW-24	4/20/09 10:52	GW	3	X							
IW-2A	4/20/09 09:57	GW	3	X							
IW-6A	4/20/09 12:05	GW	3	X							

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

REMARKS

Copy of report to Dan Simpson contains only "SO4" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 7312

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[illegible]	4/23/09 14:00	CKT 4/24/09	846

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

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ09LE
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly							
DUP20090420B	4/20/09 09:47	GW	3	x							

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

REMARKS

Copy of report to Dan Simpson contains only "SO4" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 7312

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

May 08, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75457- **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 24, 2009. This project was assigned to ACZ's project number, L75457. 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, version 12.0. The enclosed results relate only to the samples received under L75457. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-3A

ACZ Sample ID: ***L75457-01***
Date Sampled: *04/20/09 10:07*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1400		*	mg/L	100	500	05/06/09 13:56	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-4

ACZ Sample ID: ***L75457-02***
Date Sampled: *04/20/09 10:42*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1400		*	mg/L	100	500	05/06/09 13:56	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-5

ACZ Sample ID: ***L75457-03***
Date Sampled: *04/20/09 11:05*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/06/09 13:58	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: IW-9

ACZ Sample ID: ***L75457-04***
Date Sampled: *04/20/09 10:32*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1600		*	mg/L	100	500	05/06/09 13:58	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-26A

ACZ Sample ID: ***L75457-05***
Date Sampled: *04/21/09 13:55*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	10		*	mg/L	1	5	05/06/09 13:20	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-26B

ACZ Sample ID: ***L75457-06***
Date Sampled: *04/21/09 13:01*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1520		*	mg/L	50	300	05/06/09 13:58	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-26C

ACZ Sample ID: ***L75457-07***
Date Sampled: *04/21/09 13:35*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	660		*	mg/L	50	300	05/06/09 14:00	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75457***

Project ID: OJ09LE

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.02		.01863	mg/L	93.2	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00088	0.00088			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.01		.00987	mg/L	98.7	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.02	U	.01978	mg/L	98.9	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.02	U	.02008	mg/L	100.4	70	130	1.51	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.05456	mg/L	109.1	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.0011	0.0011			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04863	mg/L	97.2	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	.003	.1072	mg/L	104.1	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	.003	.1082	mg/L	105.1	70	130	0.93	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.04966	mg/L	99.3	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04778	mg/L	95.5	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	U	.1102	mg/L	110.1	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	U	.11188	mg/L	111.8	70	130	1.51	20	
WG263174													
WG263174ICV	ICV	05/05/09 21:35	MS090326-1	.05		.04968	mg/L	99.4	90	110			
WG263174ICB	ICB	05/05/09 21:39				U	mg/L		-0.00022	0.00022			
WG263174LFB	LFB	05/05/09 21:47	MS090409-2	.05005		.04748	mg/L	94.9	85	115			
L75457-07AS	AS	05/05/09 22:10	MS090409-2	.05005	U	.04266	mg/L	85.2	70	130			
L75457-07ASD	ASD	05/05/09 22:14	MS090409-2	.05005	U	.04338	mg/L	86.7	70	130	1.67	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.0507	mg/L	101.4	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05		.04822	mg/L	96.4	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1	U	.09152	mg/L	91.5	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1	U	.09244	mg/L	92.4	70	130	1	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75457***

Project ID: OJ09LE

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2		2	mg/L	100	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.507	mg/L	101.4	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.507	mg/L	101.4	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.505	mg/L	101	85	115	0.4	20	
L75457-05AS	AS	04/30/09 17:12	II090428-2	.5	U	.507	mg/L	101.4	85	115			
L75457-05ASD	ASD	04/30/09 17:15	II090428-2	.5	U	.506	mg/L	101.2	85	115	0.2	20	
WG263098													
WG263098ICV	ICV	05/04/09 11:12	II090115-1	2		1.98	mg/L	99	95	105			
WG263098ICV	ICV	05/04/09 11:12	II090115-1	2		2.003	mg/L	100.2	95	105			
WG263098ICB	ICB	05/04/09 11:16				U	mg/L		-0.03	0.03			
WG263096													
WG263096LFB	LFB	05/04/09 13:00	II090428-2	.5		.508	mg/L	101.6	85	115			
L75482-01AS	AS	05/04/09 13:21	II090428-2	.5	U	.513	mg/L	102.6	85	115			
L75482-01ASD	ASD	05/04/09 13:24	II090428-2	.5	U	.518	mg/L	103.6	85	115	0.97	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2.002		1.946	mg/L	97.2	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.488	mg/L	97.6	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.49	mg/L	98	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.492	mg/L	98.4	85	115	0.41	20	
L75457-05AS	AS	04/30/09 17:12	II090428-2	.5	U	.49	mg/L	98	85	115			
L75457-05ASD	ASD	04/30/09 17:15	II090428-2	.5	U	.491	mg/L	98.2	85	115	0.2	20	
WG263032													
WG263032ICV	ICV	05/01/09 16:06	II090115-1	2.002		1.95	mg/L	97.4	95	105			
WG263032ICB	ICB	05/01/09 16:09				U	mg/L		-0.03	0.03			
WG263032LFB	LFB	05/01/09 16:22	II090428-2	.5		.492	mg/L	98.4	85	115			
L75428-01AS	AS	05/01/09 16:29	II090428-2	.5	.01	.503	mg/L	98.6	85	115			
L75428-01ASD	ASD	05/01/09 16:32	II090428-2	.5	.01	.494	mg/L	96.8	85	115	1.81	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75457***

Project ID: OJ09LE

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2		1.943	mg/L	97.2	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.49	mg/L	98	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.492	mg/L	98.4	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.499	mg/L	99.8	85	115	1.41	20	
L75457-05AS	AS	04/30/09 17:12	II090428-2	.5	U	.5	mg/L	100	85	115			
L75457-05ASD	ASD	04/30/09 17:15	II090428-2	.5	U	.499	mg/L	99.8	85	115	0.2	20	
WG263032													
WG263032ICV	ICV	05/01/09 16:06	II090115-1	2		1.96	mg/L	98	95	105			
WG263032ICB	ICB	05/01/09 16:09				U	mg/L		-0.03	0.03			
WG263032LFB	LFB	05/01/09 16:22	II090428-2	.5		.478	mg/L	95.6	85	115			
L75428-01AS	AS	05/01/09 16:29	II090428-2	.5	.03	.516	mg/L	97.2	85	115			
L75428-01ASD	ASD	05/01/09 16:32	II090428-2	.5	.03	.501	mg/L	94.2	85	115	2.95	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263081													
WG263081ICV	ICV	05/04/09 9:03	WC090424-9	2		1.9	mg/L	95	95	105			
WG263081ICB	ICB	05/04/09 9:10				U	mg/L		-0.3	0.3			
WG263081LFB1	LFB	05/04/09 9:17	WC090302-4	5		4.71	mg/L	94.2	90	110			
L75457-01AS	AS	05/04/09 9:26	WC090302-4	5	.2	5.1	mg/L	98	90	110			
L75457-01DUP	DUP	05/04/09 9:29			.2	.21	mg/L				4.9	20	RA
WG263081LFB2	LFB	05/04/09 12:16	WC090302-4	5		4.67	mg/L	93.4	90	110			

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.04966	mg/L	99.3	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04673	mg/L	93.4	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	U	.09376	mg/L	93.7	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	U	.09504	mg/L	94.9	70	130	1.36	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75457***

Project ID: OJ09LE

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	100		100.74	mg/L	100.7	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.6	0.6			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	49.96908		48.91	mg/L	97.9	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	49.96908	9.2	58.26	mg/L	98.2	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	49.96908	9.2	58.48	mg/L	98.6	85	115	0.38	20	
L75457-05AS	AS	04/30/09 17:12	II090428-2	49.96908	7.5	55.89	mg/L	96.8	85	115			
L75457-05ASD	ASD	04/30/09 17:15	II090428-2	49.96908	7.5	56.46	mg/L	98	85	115	1.01	20	
WG263032													
WG263032ICV	ICV	05/01/09 16:06	II090115-1	100		97.28	mg/L	97.3	95	105			
WG263032ICB	ICB	05/01/09 16:09				U	mg/L		-0.6	0.6			
WG263032LFB	LFB	05/01/09 16:22	II090428-2	49.96908		48.15	mg/L	96.4	85	115			
L75428-01AS	AS	05/01/09 16:29	II090428-2	49.96908	.4	50.57	mg/L	100.4	85	115			
L75428-01ASD	ASD	05/01/09 16:32	II090428-2	49.96908	.4	49.12	mg/L	97.5	85	115	2.91	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2		2.048	mg/L	102.4	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.498	mg/L	99.6	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.497	mg/L	99.4	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.506	mg/L	101.2	85	115	1.79	20	
L75457-05AS	AS	04/30/09 17:12	II090428-2	.5	U	.506	mg/L	101.2	85	115			
L75457-05ASD	ASD	04/30/09 17:15	II090428-2	.5	U	.503	mg/L	100.6	85	115	0.59	20	
WG263098													
WG263098ICV	ICV	05/04/09 11:12	II090115-1	2		2.041	mg/L	102.1	95	105			
WG263098ICB	ICB	05/04/09 11:16				U	mg/L		-0.03	0.03			
WG263096													
WG263096LFB	LFB	05/04/09 13:00	II090428-2	.5		.519	mg/L	103.8	85	115			
L75482-01AS	AS	05/04/09 13:21	II090428-2	.5	U	.52	mg/L	104	85	115			
L75482-01ASD	ASD	05/04/09 13:24	II090428-2	.5	U	.509	mg/L	101.8	85	115	2.14	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75457***

Project ID: OJ09LE

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262990													
WG262990ICV	ICV	04/30/09 16:02	II090115-1	2.004		1.905	mg/L	95.1	95	105			
WG262990ICB	ICB	04/30/09 16:06				U	mg/L		-0.03	0.03			
WG262990LFB	LFB	04/30/09 16:18	II090428-2	.5		.476	mg/L	95.2	85	115			
L75455-09AS	AS	04/30/09 16:39	II090428-2	.5	U	.47	mg/L	94	85	115			
L75455-09ASD	ASD	04/30/09 16:42	II090428-2	.5	U	.477	mg/L	95.4	85	115	1.48	20	
L75457-05AS	AS	04/30/09 17:12	II090428-2	.5	U	.472	mg/L	94.4	85	115			
L75457-05ASD	ASD	04/30/09 17:15	II090428-2	.5	U	.48	mg/L	96	85	115	1.68	20	
WG263032													
WG263032ICV	ICV	05/01/09 16:06	II090115-1	2.004		1.896	mg/L	94.6	95	105			
WG263032ICB	ICB	05/01/09 16:09				U	mg/L		-0.03	0.03			
WG263032LFB	LFB	05/01/09 16:22	II090428-2	.5		.48	mg/L	96	85	115			
L75428-01AS	AS	05/01/09 16:29	II090428-2	.5	U	.496	mg/L	99.2	85	115			
L75428-01ASD	ASD	05/01/09 16:32	II090428-2	.5	U	.489	mg/L	97.8	85	115	1.42	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
WG263071													
WG263071ICV	ICV	05/01/09 20:05	WI090318-4	2.416		2.42	mg/L	100.2	90	110			
WG263071ICB	ICB	05/01/09 20:06				U	mg/L		-0.06	0.06			
WG263071LFB1	LFB	05/01/09 20:08	WI090317-8	2		2.036	mg/L	101.8	90	110			
L75455-06DUP	DUP	05/01/09 20:13			2.19	2.194	mg/L				0.2	20	
L75457-04AS	AS	05/01/09 20:31	WI090317-8	2	.83	2.908	mg/L	103.9	90	110			
L75457-05DUP	DUP	05/01/09 20:33			1.05	1.048	mg/L				0.2	20	
WG263071LFB2	LFB	05/01/09 20:50	WI090317-8	2		2.028	mg/L	101.4	90	110			
L75455-05AS	AS	05/01/09 21:11	WI090317-8	2	1.8	3.7	mg/L	95	90	110			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262787													
WG262787PBW	PBW	04/27/09 13:45				U	mg/L		-20	20			
WG262787LCSW	LCSW	04/27/09 13:46	PCN31923	260		252	mg/L	96.9	80	120			
L75457-04DUP	DUP	04/27/09 14:14			2940	2930	mg/L				0.3	20	
WG262803													
WG262803PBW	PBW	04/27/09 15:10				U	mg/L		-20	20			
WG262803LCSW	LCSW	04/27/09 15:12	PCN31923	260		270	mg/L	103.8	80	120			
L75482-04DUP	DUP	04/27/09 15:59			350	336	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
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.05283	mg/L	105.7	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.05005		.04535	mg/L	90.6	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1001	.0004	.10094	mg/L	100.4	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1001	.0004	.10198	mg/L	101.5	70	130	1.03	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75457***

Project ID: OJ09LE

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263167													
WG263167ICB	ICB	05/06/09 10:39				U	mg/L		-3	3			
WG263167ICV	ICV	05/06/09 10:39	WI090505-1	20		19.7	mg/L	98.5	90	110			
WG263167LFB1	LFB	05/06/09 13:17	WI090505-3	10		9.2	mg/L	92	90	110			
WG263167LFB2	LFB	05/06/09 13:22	WI090505-3	10		9.4	mg/L	94	90	110			
L75457-01DUP	DUP	05/06/09 13:56			1400	1360	mg/L				2.9	20	
L75457-02AS	AS	05/06/09 13:58	SO4TURB10	10	1400	1430	mg/L	300	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262996													
WG262996ICV	ICV	05/04/09 21:51	MS090326-1	.05		.0503	mg/L	100.6	90	110			
WG262996ICB	ICB	05/04/09 21:56				U	mg/L		-0.00022	0.00022			
WG262996LFB	LFB	05/04/09 22:06	MS090409-2	.0501		.04659	mg/L	93	85	115			
L75457-02AS	AS	05/04/09 23:37	MS090409-2	.1002	U	.09426	mg/L	94.1	70	130			
L75457-02ASD	ASD	05/04/09 23:42	MS090409-2	.1002	U	.09506	mg/L	94.9	70	130	0.85	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75457***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75457-01	WG263081	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).
	WG263167	Sulfate	375.4 - 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.
L75457-02	WG263081	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).
	WG263167	Sulfate	375.4 - 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.
L75457-03	WG263081	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).
	WG263167	Sulfate	375.4 - 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.
L75457-04	WG263081	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).
	WG263167	Sulfate	375.4 - 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.
L75457-05	WG263081	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).
	WG263167	Sulfate	375.4 - 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.
L75457-06	WG263081	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).
	WG263167	Sulfate	375.4 - 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.
L75457-07	WG263081	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).
	WG263167	Sulfate	375.4 - 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.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75457
Date Received: 4/24/2009
Received By:
Date Printed: 4/27/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2001	4.9	13

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75457
Date Received: 4/24/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75457-01	IW-3A		Y		Y							
L75457-02	IW-4		Y		Y							
L75457-03	IW-5		Y		Y							
L75457-04	IW-9		Y		Y							
L75457-05	MH-26A		Y		Y							
L75457-06	MH-26B		Y		Y							
L75457-07	MH-26C		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L75457

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly							
IW-3A	4/20/09 10:07	GW	3	X							
IW-4	4/20/09 10:42	GW	3	X							
IW-5	4/20/09 11:05	GW	3	X							
IW-9	4/20/09 10:32	GW	3	X							
MH-26A	4/21/09 13:55	GW	3	X							
MH-26B	4/21/09 13:01	GW	3	X							
MH-26C	4/21/09 13:35	GW	3	X							

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

REMARKS

Copy of report to Dan Simpson contains only "SO4" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 7321

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-23-09 14:00	CKT	4/24/09 844

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

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

Analytical Report

May 05, 2009

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

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

cc: Dan Simpson

Project ID: OJ09LE
ACZ Project ID: L75458

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 24, 2009. This project has been assigned to ACZ's project number, L75458. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L75458. 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 05, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: CC OF GV

ACZ Sample ID: ***L75458-01***
Date Sampled: *04/21/09 09:18*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	90.1			mg/L	0.5	3	04/30/09 4:22	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: HAVEN GOLF

ACZ Sample ID: ***L75458-02***
Date Sampled: *04/21/09 08:25*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	109		*	mg/L	1	5	04/30/09 4:43	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: TMM-1

ACZ Sample ID: ***L75458-03***
Date Sampled: *04/21/09 11:15*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	5.5			mg/L	0.5	3	04/30/09 5:47	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: CW-10

ACZ Sample ID: ***L75458-04***
Date Sampled: *04/22/09 09:05*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	47.9			mg/L	0.5	3	04/30/09 6:08	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: CW-6

ACZ Sample ID: ***L75458-05***
Date Sampled: *04/22/09 09:49*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	47.9			mg/L	0.5	3	04/30/09 6:29	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: CW-9

ACZ Sample ID: ***L75458-06***
Date Sampled: *04/22/09 10:45*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	44.3			mg/L	0.5	3	04/30/09 6:50	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: GV-01-GVDWID

ACZ Sample ID: ***L75458-07***
Date Sampled: *04/22/09 13:40*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	40.6			mg/L	0.5	3	04/30/09 7:53	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: GV-02-GVDWID

ACZ Sample ID: ***L75458-08***
Date Sampled: *04/22/09 13:30*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	79.5			mg/L	0.5	3	04/30/09 8:14	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: GV-SI-GVDWID

ACZ Sample ID: ***L75458-09***
Date Sampled: *04/22/09 13:15*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	5.6			mg/L	0.5	3	04/30/09 8:35	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: DUP20090422A

ACZ Sample ID: ***L75458-10***
Date Sampled: *04/22/09 00:00*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	47.3			mg/L	0.5	3	04/30/09 8:57	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2009-01

ACZ Sample ID: ***L75458-11***
Date Sampled: *04/22/09 14:00*
Date Received: *04/24/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	62.1			mg/L	0.5	3	04/30/09 9:18	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

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: ***L75458***

Project ID: OJ09LE

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262217													
WG262217ICV	ICV	04/15/09 11:40	WI090316-1	50		49.82	mg/L	99.6	90	110			
WG262217ICB	ICB	04/15/09 12:01				U	mg/L		-1.5	1.5			
WG262217ICV1	ICV	04/16/09 14:47	WI090316-1	50		49.78	mg/L	99.6	90	110			
WG262217ICB1	ICB	04/16/09 15:08				U	mg/L		-1.5	1.5			
WG262217ICV2	ICV	04/17/09 14:26	WI090316-1	50		50.76	mg/L	101.5	90	110			
WG262217ICB2	ICB	04/17/09 14:47				U	mg/L		-1.5	1.5			
WG262921													
WG262921ICV	ICV	04/29/09 22:44	WI090316-1	50		51.87	mg/L	103.7	90	110			
WG262921ICB	ICB	04/29/09 23:06				U	mg/L		-1.5	1.5			
WG262921LFB	LFB	04/29/09 23:27	WI081125-2	30		29.54	mg/L	98.5	90	110			
L75337-03AS	AS	04/30/09 0:09	WI081125-2	300	525	837.3	mg/L	104.1	90	110			
L75337-03DUP	DUP	04/30/09 0:30			525	582.4	mg/L				10.4	20	
L75458-02AS	AS	04/30/09 5:04	WI081125-2	60	109	164	mg/L	91.7	90	110			
L75458-02DUP	DUP	04/30/09 5:26			109	109.8	mg/L				0.7	20	
WG262921ICV1	ICV	04/30/09 14:03	WI090316-1	50		51.64	mg/L	103.3	90	110			
WG262921ICB1	ICB	04/30/09 14:24				U	mg/L		-1.5	1.5			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75458***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75458-02	WG262921	Sulfate	300.0 - Ion Chromatography	D1	Sample required dilution due to matrix.

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita

ACZ Project ID: L75458
Date Received: 4/24/2009
Received By: lcp
Date Printed: 4/24/2009

Receipt Verification

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

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

The following items were not in agreement: number of samples. Sample 11 was added to Chain of Custody, was received in cooler with samples 1-10.

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

The client was not contacted.

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
2001		4.9	13

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita

ACZ Project ID: L75458
Date Received: 4/24/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75458-01	CC OF GV									X		
L75458-02	HAVEN GOLF									X		
L75458-03	TMM-1									X		
L75458-04	CW-10									X		
L75458-05	CW-6									X		
L75458-06	CW-9									X		
L75458-07	GV-01-GVDWID									X		
L75458-08	GV-02-GVDWID									X		
L75458-09	GV-SI-GVDWID									X		
L75458-10	DUP20090422A									X		
L75458-11	MO-2009-01									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: lcp

L75458

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #:

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CC Of GV	4/21/09 09:18	GW	1	X							
HAVEN GOLF	4/21/09 08:25	GW	1	X							
TMM-1	4/21/09 11:15	GW	1	X							
CW-10	4/22/09 09:05	GW	1	X							
CW-6	4/22/09 09:49	GW	1	X							
CW-9	4/22/09 10:45	GW	1	X							
GV-01-GVDWID	4/22/09 13:40	GW	1	X							
GV-02-GVDWID	4/22/09 13:30	GW	1	X							
GV-SI-GVDWID	4/22/09 13:15	GW	1	X							
DUP20090422A	4/22/09	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7321

MO-2009-01 4-22-09 14:00 X

added By WPL 4-24-09

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-22-09 14:00	CKT	4/24/09 844

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

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

Analytical Report

May 12, 2009

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

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

Project ID: OJ09LE
ACZ Project ID: L75548

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 01, 2009. This project has been assigned to ACZ's project number, L75548. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L75548. 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 12, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: CW-3

ACZ Sample ID: ***L75548-01***
Date Sampled: *04/24/09 13:10*
Date Received: *05/01/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	56.2			mg/L	0.5	3	05/05/09 1:09	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: NP-2

ACZ Sample ID: ***L75548-02***
Date Sampled: *04/24/09 14:43*
Date Received: *05/01/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	32.1			mg/L	0.5	3	05/05/09 1:30	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

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.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita
Project ID: OJ09LE

ACZ Project ID: ***L75548***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG262217													
WG262217ICV	ICV	04/15/09 11:40	WI090316-1	50		49.82	mg/L	99.6	90	110			
WG262217ICB	ICB	04/15/09 12:01				U	mg/L		-1.5	1.5			
WG262217ICV1	ICV	04/16/09 14:47	WI090316-1	50		49.78	mg/L	99.6	90	110			
WG262217ICB1	ICB	04/16/09 15:08				U	mg/L		-1.5	1.5			
WG262217ICV2	ICV	04/17/09 14:26	WI090316-1	50		50.76	mg/L	101.5	90	110			
WG262217ICB2	ICB	04/17/09 14:47				U	mg/L		-1.5	1.5			
WG263133													
WG263133ICV	ICV	05/04/09 17:46	WI090504-1	50		50.89	mg/L	101.8	90	110			
WG263133ICB	ICB	05/04/09 18:07				U	mg/L		-1.5	1.5			
WG263133LFB	LFB	05/04/09 18:28	WI081125-2	30		29.65	mg/L	98.8	90	110			
L75529-06DUP	DUP	05/05/09 0:06			11.8	11.64	mg/L				1.4	20	
L75540-11AS	AS	05/05/09 0:48	WI081125-2	30	51.2	80.88	mg/L	98.9	90	110			
WG263133ICV1	ICV	05/05/09 15:34	WI090504-1	50		52.05	mg/L	104.1	90	110			
WG263133ICB1	ICB	05/05/09 15:55				U	mg/L		-1.5	1.5			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75548***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75548
Date Received: 5/1/2009
Received By:
Date Printed: 5/1/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8325	2.8	15

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75548
Date Received: 5/1/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75548-01	CW-3									X		
L75548-02	NP-2									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L 75548

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CW-3	04/24/09 13:10	GW	1	X							
NP-2	04/24/09 14:43	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 6877

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	4-30-09 15:00	[signature]	5/1/09 9:11

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

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

Analytical Report

June 01, 2009

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

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

cc: Dan Simpson

Project ID: OJ09LE
ACZ Project ID: L75820

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 15, 2009. This project has been assigned to ACZ's project number, L75820. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L75820. 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 01, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: I-10

ACZ Sample ID: ***L75820-01***
Date Sampled: *05/12/09 08:28*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	495		*	mg/L	5	30	05/29/09 0:58	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: M-20

ACZ Sample ID: ***L75820-02***
Date Sampled: *05/12/09 10:12*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	1580		*	mg/L	50	300	05/29/09 2:02	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: M-8

ACZ Sample ID: ***L75820-03***
Date Sampled: *05/12/09 12:24*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	29.6		*	mg/L	0.5	3	05/28/09 2:28	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: M-10

ACZ Sample ID: ***L75820-04***
Date Sampled: *05/12/09 15:03*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	97		*	mg/L	1	5	05/29/09 2:23	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: M-9

ACZ Sample ID: ***L75820-05***
Date Sampled: *05/13/09 10:33*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	80.2		*	mg/L	0.5	3	05/28/09 3:52	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MO-2007-5C

ACZ Sample ID: ***L75820-06***
Date Sampled: *05/13/09 16:14*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	235		*	mg/L	3	10	05/29/09 2:44	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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: ***L75820***

Project ID: OJ09LE

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263175													
WG263175ICV	ICV	05/20/09 18:33	WI090504-1	50		50.17	mg/L	100.3	90	110			
WG263175ICB	ICB	05/20/09 18:54				U	mg/L		-1.5	1.5			
WG263175ICV1	ICV	05/21/09 13:39	WI090504-1	50		50.36	mg/L	100.7	90	110			
WG263175ICB1	ICB	05/21/09 14:00				U	mg/L		-1.5	1.5			
WG264102													
WG264102ICV	ICV	05/27/09 18:22	WI090504-1	50		51.17	mg/L	102.3	90	110			
WG264102ICB	ICB	05/27/09 18:44				U	mg/L		-1.5	1.5			
WG264102LFB	LFB	05/27/09 19:05	WI090508-3	30		28.19	mg/L	94	90	110			
L75809-04AS	AS	05/28/09 0:42	WI090508-3	30	46.3	72.7	mg/L	88	90	110			M2
L75809-04DUP	DUP	05/28/09 1:03			46.3	46.62	mg/L				0.7	20	
WG264102ICV1	ICV	05/28/09 21:06	WI090504-1	50		50.86	mg/L	101.7	90	110			
WG264102ICB1	ICB	05/28/09 21:27				U	mg/L		-1.5	1.5			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75820***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75820-01	WG264102	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75820-02	WG264102	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75820-03	WG264102	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75820-04	WG264102	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75820-05	WG264102	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L75820-06	WG264102	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75820
Date Received: 5/15/2009
Received By:
Date Printed: 5/15/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8413	3.5	12

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75820
Date Received: 5/15/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75820-01	I-10									X		
L75820-02	M-20									X		
L75820-03	M-8									X		
L75820-04	M-10									X		
L75820-05	M-9									X		
L75820-06	MO-2007-5C									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L75820

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
I-10	5/12/09 08:28	GW	1	X							
M-20	5/12/09 10:12	GW	1	X							
M-8	5/12/09 12;24	GW	1	X							
M-10	5/12/09 15:03	GW	1	X							
M-9	5/13/09 10:33	GW	1	X							
MO-2007-5C	5/13/09 16:14	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 6911

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	5-14-09 1510		5.15.09 10:30

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

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

Analytical Report

Aaron Hilshorst
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

May 29, 2009

Cc: **Dan Simpson**

Project ID: OJ09LE
ACZ Project ID: L75821– **SULFATE ONLY**

Aaron Hilshorst:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 15, 2009. This project was assigned to ACZ's project number, L75821. 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, version 12.0. The enclosed results relate only to the samples received under L75821. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: MH-11

ACZ Sample ID: ***L75821-01***
Date Sampled: *05/13/09 15:36*
Date Received: *05/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	1500		*	mg/L	100	500	05/26/09 15:53	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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: ***L75821***

Project ID: OJ09LE

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264010													
WG264010ICV	ICV	05/23/09 0:38	MS090326-1	.02		.02064	mg/L	103.2	90	110			
WG264010ICB	ICB	05/23/09 0:43				U	mg/L		-0.00088	0.00088			
WG264010LFB	LFB	05/23/09 0:53	MS090518-2	.01		.01043	mg/L	104.3	85	115			
L75818-03AS	AS	05/23/09 1:13	MS090518-2	.01	.0008	.01082	mg/L	100.2	70	130			
L75818-03ASD	ASD	05/23/09 1:18	MS090518-2	.01	.0008	.01072	mg/L	99.2	70	130	0.93	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264010													
WG264010ICV	ICV	05/23/09 0:38	MS090326-1	.05		.05398	mg/L	108	90	110			
WG264010ICB	ICB	05/23/09 0:43				U	mg/L		-0.0011	0.0011			
WG264010LFB	LFB	05/23/09 0:53	MS090518-2	.05005		.0494	mg/L	98.7	85	115			
L75818-03AS	AS	05/23/09 1:13	MS090518-2	.05005	.0633	.1103	mg/L	93.9	70	130			
L75818-03ASD	ASD	05/23/09 1:18	MS090518-2	.05005	.0633	.1143	mg/L	101.9	70	130	3.56	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264010													
WG264010ICV	ICV	05/23/09 0:38	MS090326-1	.05		.05037	mg/L	100.7	90	110			
WG264010ICB	ICB	05/23/09 0:43				.00011	mg/L		-0.00022	0.00022			
WG264010LFB	LFB	05/23/09 0:53	MS090518-2	.05005		.0491	mg/L	98.1	85	115			
L75818-03AS	AS	05/23/09 1:13	MS090518-2	.05005	U	.05057	mg/L	101	70	130			
L75818-03ASD	ASD	05/23/09 1:18	MS090518-2	.05005	U	.0511	mg/L	102.1	70	130	1.04	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264010													
WG264010ICV	ICV	05/23/09 0:38	MS090326-1	.05		.05055	mg/L	101.1	90	110			
WG264010ICB	ICB	05/23/09 0:43				U	mg/L		-0.00022	0.00022			
WG264010LFB	LFB	05/23/09 0:53	MS090518-2	.05		.05047	mg/L	100.9	85	115			
L75818-03AS	AS	05/23/09 1:13	MS090518-2	.05	.0017	.05168	mg/L	100	70	130			
L75818-03ASD	ASD	05/23/09 1:18	MS090518-2	.05	.0017	.05156	mg/L	99.7	70	130	0.23	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263816													
WG263816ICV	ICV	05/20/09 0:08	II090507-1	2		1.985	mg/L	99.3	95	105			
WG263816ICB	ICB	05/20/09 0:12				U	mg/L		-0.03	0.03			
WG263816LFB	LFB	05/20/09 0:25	II090518-2	.5		.519	mg/L	103.8	85	115			
L75821-01AS	AS	05/20/09 0:31	II090518-2	.5	U	.523	mg/L	104.6	85	115			
L75821-01ASD	ASD	05/20/09 0:35	II090518-2	.5	U	.518	mg/L	103.6	85	115	0.96	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75821***

Project ID: OJ09LE

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263816													
WG263816ICV	ICV	05/20/09 0:08	II090507-1	2.002		1.968	mg/L	98.3	95	105			
WG263816ICB	ICB	05/20/09 0:12				U	mg/L		-0.03	0.03			
WG263816LFB	LFB	05/20/09 0:25	II090518-2	.5		.499	mg/L	99.8	85	115			
L75821-01AS	AS	05/20/09 0:31	II090518-2	.5	U	.495	mg/L	99	85	115			
L75821-01ASD	ASD	05/20/09 0:35	II090518-2	.5	U	.491	mg/L	98.2	85	115	0.81	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263816													
WG263816ICV	ICV	05/20/09 0:08	II090507-1	2		1.918	mg/L	95.9	95	105			
WG263816ICB	ICB	05/20/09 0:12				U	mg/L		-0.03	0.03			
WG263816LFB	LFB	05/20/09 0:25	II090518-2	.5		.504	mg/L	100.8	85	115			
L75821-01AS	AS	05/20/09 0:31	II090518-2	.5	U	.493	mg/L	98.6	85	115			
L75821-01ASD	ASD	05/20/09 0:35	II090518-2	.5	U	.486	mg/L	97.2	85	115	1.43	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264189													
WG264189ICV	ICV	05/27/09 12:47	WC090520-1	2		1.96	mg/L	98	95	105			
WG264189ICB	ICB	05/27/09 12:55				U	mg/L		-0.3	0.3			
WG264189LFB1	LFB	05/27/09 13:01	WC090302-4	5		5.19	mg/L	103.8	90	110			
L75790-03DUP	DUP	05/27/09 13:12			53	48.5	mg/L				8.9	20	
L75814-01AS	AS	05/27/09 13:23	WC090302-4	5	14.1	19.46	mg/L	107.2	90	110			
WG264189LFB2	LFB	05/27/09 15:29	WC090302-4	5		5	mg/L	100	90	110			

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264150													
WG264150ICV	ICV	05/27/09 14:00	MS090326-1	.05		.04912	mg/L	98.2	90	110			
WG264150ICB	ICB	05/27/09 14:03				U	mg/L		-0.00022	0.00022			
WG264150LFB	LFB	05/27/09 14:08	MS090526-2	.05005		.04868	mg/L	97.3	85	115			
L75818-01AS	AS	05/27/09 14:19	MS090526-2	.5005	U	.5203	mg/L	104	70	130			
L75818-01ASD	ASD	05/27/09 14:22	MS090526-2	.5005	U	.5192	mg/L	103.7	70	130	0.21	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263816													
WG263816ICV	ICV	05/20/09 0:08	II090507-1	100		100.69	mg/L	100.7	95	105			
WG263816ICB	ICB	05/20/09 0:12				U	mg/L		-0.6	0.6			
WG263816LFB	LFB	05/20/09 0:25	II090518-2	49.96908		52.13	mg/L	104.3	85	115			
L75821-01AS	AS	05/20/09 0:31	II090518-2	49.96908	106	156.62	mg/L	101.3	85	115			
L75821-01ASD	ASD	05/20/09 0:35	II090518-2	49.96908	106	159.64	mg/L	107.3	85	115	1.91	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75821***

Project ID: OJ09LE

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263816													
WG263816ICV	ICV	05/20/09 0:08	II090507-1	2		2.028	mg/L	101.4	95	105			
WG263816ICB	ICB	05/20/09 0:12				U	mg/L		-0.03	0.03			
WG263816LFB	LFB	05/20/09 0:25	II090518-2	.5		.53	mg/L	106	85	115			
L75821-01AS	AS	05/20/09 0:31	II090518-2	.5	U	.523	mg/L	104.6	85	115			
L75821-01ASD	ASD	05/20/09 0:35	II090518-2	.5	U	.549	mg/L	109.8	85	115	4.85	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263816													
WG263816ICV	ICV	05/20/09 0:08	II090507-1	2.004		1.921	mg/L	95.9	95	105			
WG263816ICB	ICB	05/20/09 0:12				U	mg/L		-0.03	0.03			
WG263816LFB	LFB	05/20/09 0:25	II090518-2	.5		.494	mg/L	98.8	85	115			
L75821-01AS	AS	05/20/09 0:31	II090518-2	.5	U	.486	mg/L	97.2	85	115			
L75821-01ASD	ASD	05/20/09 0:35	II090518-2	.5	U	.487	mg/L	97.4	85	115	0.21	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264061													
WG264061ICV	ICV	05/22/09 19:35	WI090318-4	2.416		2.38	mg/L	98.5	90	110			
WG264061ICB	ICB	05/22/09 19:36				U	mg/L		-0.06	0.06			
WG264064													
WG264064ICV	ICV	05/22/09 21:34	WI090318-4	2.416		2.379	mg/L	98.5	90	110			
WG264064ICB	ICB	05/22/09 21:35				U	mg/L		-0.06	0.06			
WG264064LFB	LFB	05/22/09 21:36	WI090317-8	2		1.992	mg/L	99.6	90	110			
L75809-02AS	AS	05/22/09 21:39	WI090317-8	2	.14	2.419	mg/L	114	90	110			M1
L75809-05DUP	DUP	05/22/09 21:41			U	U	mg/L				0	20	RA

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG263836													
WG263836PBW	PBW	05/20/09 9:00				U	mg/L		-20	20			
WG263836LCSW	LCSW	05/20/09 9:03	PCN31923	260		256	mg/L	98.5	80	120			
L75815-02DUP	DUP	05/20/09 9:11			180	178	mg/L				1.1	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264150													
WG264150ICV	ICV	05/27/09 14:00	MS090326-1	.05		.05244	mg/L	104.9	90	110			
WG264150ICB	ICB	05/27/09 14:03				U	mg/L		-0.00022	0.00022			
WG264150LFB	LFB	05/27/09 14:08	MS090526-2	.05005		.05596	mg/L	111.8	85	115			
L75818-01AS	AS	05/27/09 14:19	MS090526-2	.5005	3.25	3.982	mg/L	146.3	70	130			M3
L75818-01ASD	ASD	05/27/09 14:22	MS090526-2	.5005	3.25	3.984	mg/L	146.7	70	130	0.05	20	M3

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75821***

Project ID: OJ09LE

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264145													
WG264145ICB	ICB	05/26/09 13:43				U	mg/L		-3	3			
WG264145ICV	ICV	05/26/09 13:43	WI090515-3	20		19.8	mg/L	99	90	110			
WG264145LFB2	LFB	05/26/09 15:29	WI090505-3	10		9.6	mg/L	96	90	110			
WG264145LFB1	LFB	05/26/09 15:41	WI090505-3	10		9.2	mg/L	92	90	110			
L75817-18DUP	DUP	05/26/09 15:43			130	127.1	mg/L				2.3	20	
L75821-01AS	AS	05/26/09 15:53	SO4TURB10	10	1500	1530	mg/L	300	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG264010													
WG264010ICV	ICV	05/23/09 0:38	MS090326-1	.05		.04925	mg/L	98.5	90	110			
WG264010ICB	ICB	05/23/09 0:43				.0001	mg/L		-0.00022	0.00022			
WG264010LFB	LFB	05/23/09 0:53	MS090518-2	.0501		.04671	mg/L	93.2	85	115			
L75818-03AS	AS	05/23/09 1:13	MS090518-2	.0501	U	.04742	mg/L	94.7	70	130			
L75818-03ASD	ASD	05/23/09 1:18	MS090518-2	.0501	U	.04751	mg/L	94.8	70	130	0.19	20	

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Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L75821***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75821-01	WG264150	Selenium, dissolved	M200.8 ICP-MS	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG264064	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.
			M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG264145	Sulfate	375.4 - 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.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

ACZ Laboratories, Inc.
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Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75821
Date Received: 5/15/2009
Received By:
Date Printed: 5/15/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA8413	3.5	12

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L75821
Date Received: 5/15/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L75821-01	MH-11		Y		Y							

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L75821

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ09LE

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly							
MH-11	5/13/09 15:36	GW	3	x							

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

REMARKS

Copy of report to Dan Simpson contains only "SO4" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 6911

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	5-14-09 15:00	[signature]	5.15.09 10:30

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

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

Analytical Report

July 31, 2009

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

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

cc: Dan Simpson

Project ID: OJ0A0G
ACZ Project ID: L76904

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 13, 2009. This project has been assigned to ACZ's project number, L76904. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L76904. 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 31, 2009. 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.

Sue Webber has reviewed and approved this report.

FMI Gold Copper - Sierrita

July 31, 2009

Project ID: OJ0A0G
ACZ Project ID: L76904

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 7 ground water samples from FMI Gold & Copper - Sierrita on July 13, 2009. 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 L76904. 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 except for the sulfate values flagged with an "HC", which were initially analyzed within the hold time.

Sample Analysis

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

1. The samples were received outside of the acceptable temperature range of 0 to 6 degrees C.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-1A

ACZ Sample ID: ***L76904-01***
Date Sampled: *07/01/09 12:21*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	16.3		*	mg/L	0.5	3	07/22/09 2:07	aml

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-1B

ACZ Sample ID: ***L76904-02***
Date Sampled: *07/01/09 11:13*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	99	H	*	mg/L	2	8	07/30/09 20:15	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-1C

ACZ Sample ID: ***L76904-03***
Date Sampled: *07/01/09 12:05*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	236	H	*	mg/L	5	30	07/30/09 20:36	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-4A

ACZ Sample ID: ***L76904-04***
Date Sampled: *07/01/09 09:12*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	36.3		*	mg/L	0.5	3	07/22/09 3:11	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-4B

ACZ Sample ID: ***L76904-05***
Date Sampled: *07/01/09 08:08*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	34.7		*	mg/L	0.5	3	07/22/09 3:32	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-4C

ACZ Sample ID: ***L76904-06***
Date Sampled: *07/01/09 08:30*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	82.7		*	mg/L	0.5	3	07/22/09 3:53	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: DUP20090701A

ACZ Sample ID: ***L76904-07***
Date Sampled: *07/01/09 00:00*
Date Received: *07/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	227	H	*	mg/L	5	30	07/30/09 20:57	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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: ***L76904***

Project ID: OJ0A0G

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267231													
WG267231ICV	ICV	07/14/09 18:34	WI090615-9	50		51.27	mg/L	102.5	90	110			
WG267231ICB	ICB	07/14/09 18:56				U	mg/L		-1.5	1.5			
WG267231ICV1	ICV	07/22/09 0:01	WI090615-9	50		50.48	mg/L	101	90	110			
WG267231ICB1	ICB	07/22/09 0:22				U	mg/L		-1.5	1.5			
WG267231LFB	LFB	07/22/09 0:43	WI090715-3	30		30.01	mg/L	100	90	110			
L76872-09AS	AS	07/22/09 1:25	WI090715-3	30	70.9	97.3	mg/L	88	90	110			M2
L76872-09DUP	DUP	07/22/09 1:46			70.9	71.28	mg/L				0.5	20	
WG267231ICV2	ICV	07/22/09 18:47	WI090615-9	50		52.37	mg/L	104.7	90	110			
WG267231ICB2	ICB	07/22/09 19:09				U	mg/L		-1.5	1.5			
WG267518													
WG267518ICV	ICV	07/29/09 12:06	WI090615-9	50		50.6	mg/L	101.2	90	110			
WG267518ICB	ICB	07/29/09 12:27				U	mg/L		-1.5	1.5			
WG267518ICV1	ICV	07/30/09 12:52	WI090615-9	50		48.77	mg/L	97.5	90	110			
WG267518ICB1	ICB	07/30/09 13:13				U	mg/L		-1.5	1.5			
WG267518LFB	LFB	07/30/09 13:34	WI090715-3	30		28.64	mg/L	95.5	90	110			
L76872-07AS	AS	07/30/09 19:12	WI090715-3	30	17.5	48.02	mg/L	101.7	90	110			
L76872-07DUP	DUP	07/30/09 19:33			17.5	17.52	mg/L				0.1	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L76904***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L76904-01	WG267231	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L76904-02	WG267518	Sulfate	300.0 - Ion Chromatography	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
L76904-03	WG267518	Sulfate	300.0 - Ion Chromatography	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
L76904-04	WG267231	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L76904-05	WG267231	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L76904-06	WG267231	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L76904-07	WG267518	Sulfate	300.0 - Ion Chromatography	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L76904
Date Received: 7/13/2009
Received By:
Date Printed: 7/13/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2139	19.3	14

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L76904
Date Received: 7/13/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L76904-01	MO-2007-1A									X		
L76904-02	MO-2007-1B									X		
L76904-03	MO-2007-1C									X		
L76904-04	MO-2007-4A									X		
L76904-05	MO-2007-4B									X		
L76904-06	MO-2007-4C									X		
L76904-07	DUP20090701A									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

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

L76904

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson
Company: HydroGeoChem
E-mail: dans@hginc.com
Telephone: 520-293-1500 ext 133

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ0A0G
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375
MO-2007-1A	07-01-09 12:21	GW	1	X
MO-2007-1B	07-01-09 11:13	GW	1	X
MO-2007-1C	07-01-09 12:05	GW	1	X
MO-2007-4A	07-01-09 09:12	GW	1	X
MO-2007-4B	07-01-09 08:08	GW	1	X
MO-2007-4C	07-01-09 08:30	GW	1	X
DUP20090701A	07-01-09	GW	1	X

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

REMARKS:

UPS Tracking # 1Z 867 7E4 23 1000 7296

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	7-8-09 15:30		7-13-09 11:00

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

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

Analytical Report

August 06, 2009

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

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

cc: Dan Simpson

Project ID: OJ0A0G
ACZ Project ID: L76951

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 15, 2009. This project has been assigned to ACZ's project number, L76951. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L76951. 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 06, 2009. 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.

Sue Webber has reviewed and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: I-10

ACZ Sample ID: ***L76951-01***
Date Sampled: *07/14/09 08:50*
Date Received: *07/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	482		*	mg/L	5	30	08/03/09 3:19	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: M-9

ACZ Sample ID: ***L76951-02***
Date Sampled: *07/14/09 11:30*
Date Received: *07/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	81.7		*	mg/L	0.5	3	08/03/09 3:40	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: M-10

ACZ Sample ID: ***L76951-03***
Date Sampled: *07/14/09 10:12*
Date Received: *07/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	96		*	mg/L	2	8	08/03/09 4:01	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-2

ACZ Sample ID: ***L76951-04***
Date Sampled: *07/14/09 07:00*
Date Received: *07/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	451		*	mg/L	5	30	08/03/09 4:22	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: DUP20090714A

ACZ Sample ID: ***L76951-05***
Date Sampled: *07/14/09 00:00*
Date Received: *07/15/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	470		*	mg/L	10	50	08/04/09 17:00	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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: ***L76951***

Project ID: OJ0A0G

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267918													
WG267918ICV	ICV	07/29/09 12:06	WI090615-9	50		50.6	mg/L	101.2	90	110			
WG267918ICB	ICB	07/29/09 12:27				U	mg/L		-1.5	1.5			
WG267918ICV1	ICV	08/03/09 1:12	WI090615-9	50		49.62	mg/L	99.2	90	110			
WG267918ICB1	ICB	08/03/09 1:33				U	mg/L		-1.5	1.5			
WG267918LFB	LFB	08/03/09 1:54	WI090715-3	30		28.16	mg/L	93.9	90	110			
L76944-10AS	AS	08/03/09 2:37	WI090715-3	30	4.5	34.26	mg/L	99.2	90	110			
L76944-10DUP	DUP	08/03/09 2:58			4.5	4.46	mg/L				0.9	20	RA
WG267918ICV2	ICV	08/03/09 14:16	WI090615-9	50		53.61	mg/L	107.2	90	110			
WG268075													
WG268075ICV	ICV	08/04/09 7:09	WI090615-9	50		49.79	mg/L	99.6	90	110			
WG268075ICB	ICB	08/04/09 7:30				U	mg/L		-1.5	1.5			
WG268075ICV1	ICV	08/04/09 15:56	WI090615-9	50		49.75	mg/L	99.5	90	110			
WG268075ICB1	ICB	08/04/09 16:18				U	mg/L		-1.5	1.5			
WG268075LFB	LFB	08/04/09 16:39	WI090715-3	30		30.49	mg/L	101.6	90	110			
L76951-05AS	AS	08/04/09 17:21	WI090715-3	600	470	945	mg/L	79.2	90	110			M2
L76951-05DUP	DUP	08/04/09 17:42			470	505	mg/L				7.2	20	
WG268075ICV2	ICV	08/05/09 11:21	WI090615-9	50		50.22	mg/L	100.4	90	110			
WG268075ICB2	ICB	08/05/09 11:42				U	mg/L		-1.5	1.5			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L76951***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L76951-01	WG267918	Sulfate	300.0 - Ion Chromatography	D1	Sample required dilution due to matrix.
			300.0 - 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).
L76951-02	WG267918	Sulfate	300.0 - 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).
L76951-03	WG267918	Sulfate	300.0 - Ion Chromatography	D1	Sample required dilution due to matrix.
			300.0 - 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).
L76951-04	WG267918	Sulfate	300.0 - Ion Chromatography	D1	Sample required dilution due to matrix.
			300.0 - 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).
L76951-05	WG268075	Sulfate	300.0 - Ion Chromatography	D1	Sample required dilution due to matrix.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L76951
Date Received: 7/15/2009
Received By:
Date Printed: 7/15/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2451	1.7	12

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L76951
Date Received: 7/15/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L76951-01	I-10									X		
L76951-02	M-9									X		
L76951-03	M-10									X		
L76951-04	MO-2007-2									X		
L76951-05	DUP20090714A									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L26951

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson
Company: HydroGeoChem
E-mail: dans@hginc.com
Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ0A0G
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
I-10	07-14-09 08:50	GW	1	X							
M-9	07-14-09 11:30	GW	1	X							
M-10	07-14-09 10:12	GW	1	X							
MO-2007-2	07-14-09 07:00	GW	1	X							
DUP20090714A	07-14-09	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 6939

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[illegible]	7-14-09 15:00	[illegible]	7-15-09

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

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

Analytical Report

August 05, 2009

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

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

cc: Dan Simpson

Project ID: OJ0A0G
ACZ Project ID: L77100

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 23, 2009. This project has been assigned to ACZ's project number, L77100. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L77100. 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 05, 2009. 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.

Sue Webber has reviewed and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MH-14

ACZ Sample ID: ***L77100-01***
Date Sampled: *07/21/09 13:40*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/28/09 12:27	skg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP		U		mg/L	0.03	0.2	07/24/09 18:21	aeh
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	07/29/09 22:05	msh
Arsenic, dissolved	M200.8 ICP-MS	0.003	B		mg/L	0.001	0.004	07/27/09 23:20	msh
Barium, dissolved	M200.7 ICP	0.048			mg/L	0.003	0.02	07/24/09 18:21	aeh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	07/27/09 23:20	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	07/27/09 23:20	msh
Calcium, dissolved	M200.7 ICP	471			mg/L	0.2	1	07/24/09 18:21	aeh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	07/27/09 12:54	aeh
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/24/09 18:21	aeh
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/24/09 18:21	aeh
Iron, dissolved	M200.7 ICP	0.02	B		mg/L	0.02	0.05	07/24/09 18:21	aeh
Lead, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0002	0.001	07/27/09 23:20	msh
Magnesium, dissolved	M200.7 ICP	110			mg/L	0.2	1	07/24/09 18:21	aeh
Manganese, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/27/09 12:54	aeh
Mercury, dissolved	M245.1 CVAA		U		mg/L	0.0002	0.001	07/28/09 11:16	pmc
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	07/27/09 12:54	aeh
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/24/09 18:21	aeh
Potassium, dissolved	M200.7 ICP	7.3			mg/L	0.3	2	07/24/09 18:21	aeh
Selenium, dissolved	M200.8 ICP-MS	0.0012			mg/L	0.0002	0.001	07/27/09 23:20	msh
Sodium, dissolved	M200.7 ICP	121			mg/L	0.3	2	07/24/09 18:21	aeh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	07/27/09 23:20	msh
Uranium, dissolved	M200.8 ICP-MS	0.0326			mg/L	0.0002	0.001	07/27/09 23:20	msh
Zinc, dissolved	M200.7 ICP	1.33			mg/L	0.02	0.1	07/27/09 12:54	aeh

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MH-14

ACZ Sample ID: ***L77100-01***
Date Sampled: *07/21/09 13:40*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		145			mg/L	2	20	07/27/09 0:00	kah
Carbonate as CaCO3			U		mg/L	2	20	07/27/09 0:00	kah
Hydroxide as CaCO3			U		mg/L	2	20	07/27/09 0:00	kah
Total Alkalinity		145			mg/L	2	20	07/27/09 0:00	kah
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-5.5			%			08/05/09 0:00	calc
Sum of Anions		42.5			meq/L	0.1	0.5	08/05/09 0:00	calc
Sum of Cations		38.1			meq/L	0.1	0.5	08/05/09 0:00	calc
Chloride	SM4500Cl-E	140		*	mg/L	10	50	07/29/09 16:13	aml
Conductivity @25C	SM2510B	3000			umhos/cm	1	10	07/27/09 0:14	kah
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.004	B	*	mg/L	0.003	0.01	07/30/09 18:08	aml
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	07/28/09 12:27	kah
Hardness as CaCO3	SM2340B - Calculation	1630			mg/L	1	7	08/05/09 0:00	calc
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.61		*	mg/L	0.02	0.1	07/31/09 19:57	pjb
pH (lab)	SM4500H+ B								
pH		8.0	H		units	0.1	0.1	07/27/09 0:00	kah
pH measured at		22.0			C	0.1	0.1	07/27/09 0:00	kah
Residue, Filterable (TDS) @180C	SM2540C	2810			mg/L	10	20	07/24/09 14:37	kah
Sulfate	SM4500 SO4-D	1700			mg/L	50	250	07/28/09 14:32	kah
TDS (calculated)	Calculation	2640			mg/L	10	50	08/05/09 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.06						08/05/09 0:00	calc

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MH-28

ACZ Sample ID: ***L77100-02***
Date Sampled: *07/20/09 12:25*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/28/09 12:36	skg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP		U		mg/L	0.03	0.2	07/24/09 18:24	aeh
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	07/29/09 22:09	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	07/27/09 23:23	msh
Barium, dissolved	M200.7 ICP	0.031			mg/L	0.003	0.02	07/24/09 18:24	aeh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	07/27/09 23:23	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	07/27/09 23:23	msh
Calcium, dissolved	M200.7 ICP	577			mg/L	0.2	1	07/24/09 18:24	aeh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	07/27/09 12:57	aeh
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/24/09 18:24	aeh
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/24/09 18:24	aeh
Iron, dissolved	M200.7 ICP	0.39			mg/L	0.02	0.05	07/24/09 18:24	aeh
Lead, dissolved	M200.8 ICP-MS	0.0011			mg/L	0.0002	0.001	07/27/09 23:23	msh
Magnesium, dissolved	M200.7 ICP	85.5			mg/L	0.2	1	07/24/09 18:24	aeh
Manganese, dissolved	M200.7 ICP	0.06			mg/L	0.01	0.05	07/27/09 12:57	aeh
Mercury, dissolved	M245.1 CVAA		U		mg/L	0.0002	0.001	07/28/09 11:22	pmc
Molybdenum, dissolved	M200.7 ICP	0.03	B		mg/L	0.02	0.1	07/27/09 12:57	aeh
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/24/09 18:24	aeh
Potassium, dissolved	M200.7 ICP	6.5			mg/L	0.3	2	07/24/09 18:24	aeh
Selenium, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	07/27/09 23:23	msh
Sodium, dissolved	M200.7 ICP	151			mg/L	0.3	2	07/24/09 18:24	aeh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	07/27/09 23:23	msh
Uranium, dissolved	M200.8 ICP-MS	0.0274			mg/L	0.0002	0.001	07/27/09 23:23	msh
Zinc, dissolved	M200.7 ICP	1.05			mg/L	0.02	0.1	07/27/09 12:57	aeh

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MH-28

ACZ Sample ID: ***L77100-02***
Date Sampled: *07/20/09 12:25*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		122			mg/L	2	20	07/27/09 0:00	kah
Carbonate as CaCO3			U		mg/L	2	20	07/27/09 0:00	kah
Hydroxide as CaCO3			U		mg/L	2	20	07/27/09 0:00	kah
Total Alkalinity		122			mg/L	2	20	07/27/09 0:00	kah
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-4.6			%			08/05/09 0:00	calc
Sum of Anions		46.8			meq/L	0.1	0.5	08/05/09 0:00	calc
Sum of Cations		42.7			meq/L	0.1	0.5	08/05/09 0:00	calc
Chloride	SM4500Cl-E	130		*	mg/L	10	50	07/29/09 16:13	aml
Conductivity @25C	SM2510B	3350			umhos/cm	1	10	07/27/09 0:22	kah
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.039		*	mg/L	0.003	0.01	07/30/09 18:09	aml
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	07/28/09 12:44	kah
Hardness as CaCO3	SM2340B - Calculation	1790			mg/L	1	7	08/05/09 0:00	calc
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.16		*	mg/L	0.02	0.1	07/31/09 19:59	pjb
pH (lab)	SM4500H+ B								
pH		7.9	H		units	0.1	0.1	07/27/09 0:00	kah
pH measured at		22.0			C	0.1	0.1	07/27/09 0:00	kah
Residue, Filterable (TDS) @180C	SM2540C	3230			mg/L	10	20	07/24/09 14:38	kah
Sulfate	SM4500 SO4-D	1940			mg/L	50	250	07/28/09 14:34	kah
TDS (calculated)	Calculation	2960			mg/L	10	50	08/05/09 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						08/05/09 0:00	calc

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-3C

ACZ Sample ID: ***L77100-03***
Date Sampled: *07/22/09 13:02*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	107			mg/L	2	8	08/04/09 11:43	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-6A

ACZ Sample ID: ***L77100-04***
Date Sampled: *07/22/09 10:15*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	19.8			mg/L	0.5	3	08/03/09 19:32	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-6B

ACZ Sample ID: ***L77100-05***
Date Sampled: *07/22/09 09:21*
Date Received: *07/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	63.5			mg/L	0.5	3	08/03/09 19:54	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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: ***L77100***

Project ID: OJ0A0G

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267547													
WG267547PBW1	PBW	07/26/09 12:20				6.9	mg/L		-20	20			
WG267547LCSW2	LCSW	07/26/09 12:33	WC090726-1	820.0001		813.1	mg/L	99.2	90	110			
WG267547PBW2	PBW	07/26/09 16:28				U	mg/L		-20	20			
WG267547LCSW5	LCSW	07/26/09 16:40	WC090726-1	820.0001		812.4	mg/L	99.1	90	110			
WG267547PBW3	PBW	07/26/09 19:55				U	mg/L		-20	20			
WG267547LCSW8	LCSW	07/26/09 20:08	WC090726-1	820.0001		812.6	mg/L	99.1	90	110			
WG267547PBW4	PBW	07/26/09 23:16				U	mg/L		-20	20			
WG267547LCSW11	LCSW	07/26/09 23:30	WC090726-1	820.0001		819.7	mg/L	100	90	110			
L77102-02DUP	DUP	07/27/09 1:07			236	235.7	mg/L				0.1	20	
WG267547LCSW14	LCSW	07/27/09 3:04	WC090726-1	820.0001		822.8	mg/L	100.3	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	2		1.938	mg/L	96.9	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.09	0.09			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	1		1.022	mg/L	102.2	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	1	U	1.05	mg/L	105	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	1	U	1.042	mg/L	104.2	85	115	0.76	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267684													
WG267684ICV	ICV	07/29/09 20:58	MS090727-2	.02		.01809	mg/L	90.5	90	110			
WG267684ICB	ICB	07/29/09 21:02				U	mg/L		-0.00088	0.00088			
WG267684LFB	LFB	07/29/09 21:11	MS090723-2	.01		.01001	mg/L	100.1	85	115			
L76939-02AS	AS	07/29/09 21:31	MS090723-2	.1	U	.0942	mg/L	94.2	70	130			
L76939-02ASD	ASD	07/29/09 21:36	MS090723-2	.1	U	.0981	mg/L	98.1	70	130	4.06	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05083	mg/L	101.7	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.0011	0.0011			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.05005		.04976	mg/L	99.4	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.05005	.0016	.05231	mg/L	101.3	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.05005	.0016	.05388	mg/L	104.5	70	130	2.96	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	2		1.9474	mg/L	97.4	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.009	0.009			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	.5		.4985	mg/L	99.7	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	.5	.015	.5164	mg/L	100.3	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	.5	.015	.5046	mg/L	97.9	85	115	2.31	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

Project ID: OJ0A0G

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05084	mg/L	101.7	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.00022	0.00022			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.05005		.05022	mg/L	100.3	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.05005	U	.05236	mg/L	104.6	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.05005	U	.05457	mg/L	109	70	130	4.13	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05121	mg/L	102.4	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.00022	0.00022			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.05		.05032	mg/L	100.6	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.05	U	.04925	mg/L	98.5	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.05	U	.05042	mg/L	100.8	70	130	2.35	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	100		94.8	mg/L	94.8	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.6	0.6			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	67.99734		68.46	mg/L	100.7	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	67.99734	120	182.14	mg/L	91.4	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	67.99734	120	179.77	mg/L	87.9	85	115	1.31	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267804													
WG267804ICB	ICB	07/29/09 14:29				U	mg/L		-3	3			
WG267804ICV	ICV	07/29/09 14:29	WI090121-2	54.835		55.6	mg/L	101.4	90	110			
WG267804LFB1	LFB	07/29/09 15:55	WI090309-3	30		28.9	mg/L	96.3	90	110			
L77097-03AS	AS	07/29/09 15:57	WI090309-3	30	3	32.1	mg/L	97	90	110			
L77097-04DUP	DUP	07/29/09 15:57			1	1	mg/L				0	20	RA
WG267804LFB2	LFB	07/29/09 15:59	WI090309-3	30		29.3	mg/L	97.7	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267598													
WG267598ICV	ICV	07/27/09 12:14	II090507-1	2		1.997	mg/L	99.9	95	105			
WG267598ICB	ICB	07/27/09 12:18				U	mg/L		-0.03	0.03			
WG267598LFB	LFB	07/27/09 12:30	II090713-2	.5		.547	mg/L	109.4	85	115			
L77073-01AS	AS	07/27/09 12:37	II090713-2	.5	U	.556	mg/L	111.2	85	115			
L77073-01ASD	ASD	07/27/09 12:40	II090713-2	.5	U	.556	mg/L	111.2	85	115	0	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

Project ID: OJ0A0G

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	2.002		1.976	mg/L	98.7	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.03	0.03			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	.5		.508	mg/L	101.6	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	.5	U	.506	mg/L	101.2	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	.5	U	.493	mg/L	98.6	85	115	2.6	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267547													
WG267547LCSW1	LCSW	07/26/09 12:22	PCN32481	1408.8		1356	umhos/cm	96.3	90	110			
WG267547LCSW4	LCSW	07/26/09 16:29	PCN32481	1408.8		1356	umhos/cm	96.3	90	110			
WG267547LCSW7	LCSW	07/26/09 19:57	PCN32481	1408.8		1362	umhos/cm	96.7	90	110			
WG267547LCSW10	LCSW	07/26/09 23:18	PCN32481	1408.8		1389	umhos/cm	98.6	90	110			
L77102-02DUP	DUP	07/27/09 1:07			492	488	umhos/cm				0.8	20	
WG267547LCSW13	LCSW	07/27/09 2:53	PCN32481	1408.8		1364	umhos/cm	96.8	90	110			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	2		1.894	mg/L	94.7	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.03	0.03			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	.5		.495	mg/L	99	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	.5	.03	.523	mg/L	98.6	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	.5	.03	.512	mg/L	96.4	85	115	2.13	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267871													
WG267871ICV	ICV	07/30/09 17:49	WI090728-6	.3		.2912	mg/L	97.1	90	110			
WG267871ICB	ICB	07/30/09 17:50				U	mg/L		-0.009	0.009			
WG267658LRB	LRB	07/30/09 17:51				U	mg/L		-0.009	0.009			
WG267658LFB	LFB	07/30/09 17:51	WI090728-4	.2		.2019	mg/L	101	90	110			
L77095-02DUP	DUP	07/30/09 18:05			.003	.0038	mg/L				23.5	20	RA
L77095-04LFM	LFM	07/30/09 18:07	WI090728-4	.2	U	.2004	mg/L	100.2	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267678													
WG267678ICV	ICV	07/28/09 11:25	WC090717-1	2		2.05	mg/L	102.5	95	105			
WG267678ICB	ICB	07/28/09 11:32				U	mg/L		-0.3	0.3			
WG267678LFB1	LFB	07/28/09 11:43	WC090302-4	5		5.23	mg/L	104.6	90	110			
L76954-05AS	AS	07/28/09 11:55	WC090302-4	200	52	243.6	mg/L	95.8	90	110			
L76954-05DUP	DUP	07/28/09 11:59			52	50.9	mg/L				2.1	20	
WG267678LFB2	LFB	07/28/09 14:16	WC090302-4	5		5.18	mg/L	103.6	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

Project ID: OJ0A0G

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	2		1.909	mg/L	95.5	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.06	0.06			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	1		1.021	mg/L	102.1	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	1	U	1.036	mg/L	103.6	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	1	U	1.011	mg/L	101.1	85	115	2.44	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05066	mg/L	101.3	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.00022	0.00022			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.05005		.0487	mg/L	97.3	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.05005	U	.04946	mg/L	98.8	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.05005	U	.05056	mg/L	101	70	130	2.2	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	100		95.36	mg/L	95.4	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.6	0.6			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	50.00889		49.55	mg/L	99.1	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	50.00889	86	131.45	mg/L	90.9	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	50.00889	86	130.02	mg/L	88	85	115	1.09	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267598													
WG267598ICV	ICV	07/27/09 12:14	II090507-1	2		1.9617	mg/L	98.1	95	105			
WG267598ICB	ICB	07/27/09 12:18				U	mg/L		-0.015	0.015			
WG267598LFB	LFB	07/27/09 12:30	II090713-2	.5		.5708	mg/L	114.2	85	115			
L77073-01AS	AS	07/27/09 12:37	II090713-2	.5	.154	.7187	mg/L	112.9	85	115			
L77073-01ASD	ASD	07/27/09 12:40	II090713-2	.5	.154	.7221	mg/L	113.6	85	115	0.47	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267613													
WG267613ICV	ICV	07/28/09 11:05	II090723-3	.005015		.00502	mg/L	100.1	95	105			
WG267613ICB	ICB	07/28/09 11:07				U	mg/L		-0.0002	0.0002			
WG267613LRB	LRB	07/28/09 11:11				U	mg/L		-0.00044	0.00044			
WG267613LFB	LFB	07/28/09 11:14	II090716-3	.002		.00204	mg/L	102	85	115			
L77100-01LFM	LFM	07/28/09 11:18	II090716-3	.002	U	.00205	mg/L	102.5	85	115			
L77100-01LFMD	LFMD	07/28/09 11:20	II090716-3	.002	U	.00205	mg/L	102.5	85	115	0	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

Project ID: OJ0A0G

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267598													
WG267598ICV	ICV	07/27/09 12:14	II090507-1	2		2.019	mg/L	101	95	105			
WG267598ICB	ICB	07/27/09 12:18				U	mg/L		-0.03	0.03			
WG267598LFB	LFB	07/27/09 12:30	II090713-2	.5		.545	mg/L	109	85	115			
L77073-01AS	AS	07/27/09 12:37	II090713-2	.5	U	.542	mg/L	108.4	85	115			
L77073-01ASD	ASD	07/27/09 12:40	II090713-2	.5	U	.551	mg/L	110.2	85	115	1.65	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	2.004		1.947	mg/L	97.2	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.03	0.03			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	.5		.498	mg/L	99.6	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	.5	U	.507	mg/L	101.4	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	.5	U	.496	mg/L	99.2	85	115	2.19	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
WG267950													
WG267950ICV	ICV	07/31/09 19:37	WI090619-8	2.416		2.251	mg/L	93.2	90	110			
WG267950ICB	ICB	07/31/09 19:38				U	mg/L		-0.06	0.06			
WG267950LFB1	LFB	07/31/09 19:42	WI090317-8	2		1.951	mg/L	97.6	90	110			
L76975-01AS	AS	07/31/09 19:45	WI090317-8	2	U	1.776	mg/L	88.8	90	110			M2
L76975-02DUP	DUP	07/31/09 19:48			.02	.041	mg/L				68.9	20	RA
WG267950LFB2	LFB	07/31/09 20:24	WI090317-8	2		1.908	mg/L	95.4	90	110			

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267547													
WG267547LCSW3	LCSW	07/26/09 12:36	PCN31552	6		6.03	units	100.5	90	110			
WG267547LCSW6	LCSW	07/26/09 16:43	PCN31552	6		6.04	units	100.7	90	110			
WG267547LCSW9	LCSW	07/26/09 20:11	PCN31552	6		6.03	units	100.5	90	110			
WG267547LCSW12	LCSW	07/26/09 23:33	PCN31552	6		6.03	units	100.5	90	110			
L77102-02DUP	DUP	07/27/09 1:07			8.6	8.66	units				0.7	20	
WG267547LCSW15	LCSW	07/27/09 3:07	PCN31552	6		6.03	units	100.5	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	20		19.73	mg/L	98.7	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.9	0.9			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	100.0031		101.48	mg/L	101.5	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	100.0031	7.1	109.84	mg/L	102.7	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	100.0031	7.1	108.63	mg/L	101.5	85	115	1.11	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

Project ID: OJ0A0G

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267531													
WG267531PBW	PBW	07/24/09 14:25				U	mg/L		-20	20			
WG267531LCSW	LCSW	07/24/09 14:25	PCN32384	260		258	mg/L	99.2	80	120			
L77102-02DUP	DUP	07/24/09 14:39			310	312	mg/L				0.6	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05213	mg/L	104.3	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.00022	0.00022			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.05005		.0479	mg/L	95.7	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.05005	U	.05107	mg/L	102	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.05005	U	.05264	mg/L	105.2	70	130	3.03	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267516													
WG267516ICV	ICV	07/24/09 17:35	II090507-1	100		97.96	mg/L	98	95	105			
WG267516ICV	ICV	07/24/09 17:35	II090507-1	100		97.6	mg/L	97.6	95	105			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-6	6			
WG267516ICB	ICB	07/24/09 17:38				U	mg/L		-0.9	0.9			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	99.97081		101.29	mg/L	101.3	85	115			
WG267516LFB	LFB	07/24/09 17:52	II090713-2	99.97081		102	mg/L	102	85	115			
L77073-01AS	AS	07/24/09 17:58	II090713-2	99.97081	4.9	107.25	mg/L	102.4	85	115			
L77073-01ASD	ASD	07/24/09 18:01	II090713-2	99.97081	4.9	105.21	mg/L	100.3	85	115	1.92	20	

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267923													
WG267923ICV	ICV	07/29/09 12:06	WI090615-9	50		50.6	mg/L	101.2	90	110			
WG267923ICB	ICB	07/29/09 12:27				U	mg/L		-1.5	1.5			
WG267923ICV1	ICV	08/03/09 17:05	WI090615-9	50		50.29	mg/L	100.6	90	110			
WG267923ICB1	ICB	08/03/09 17:26				U	mg/L		-1.5	1.5			
WG267923LFB	LFB	08/03/09 17:47	WI090715-3	30		30.5	mg/L	101.7	90	110			
L77033-12AS	AS	08/03/09 18:29	WI090715-3	30	10.8	40.22	mg/L	98.1	90	110			
L77033-12DUP	DUP	08/03/09 18:50			10.8	10.74	mg/L				0.6	20	
WG267923ICV2	ICV	08/04/09 7:09	WI090615-9	50		49.79	mg/L	99.6	90	110			
WG267923ICB2	ICB	08/04/09 7:30				U	mg/L		-1.5	1.5			
WG267923ICV3	ICV	08/04/09 11:01	WI090615-9	50		49.77	mg/L	99.5	90	110			
WG267923ICB3	ICB	08/04/09 11:22				U	mg/L		-1.5	1.5			

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267698													
WG267698PBW	PBW	07/28/09 13:55				U	mg/L		-30	30			
WG267698LCSW	LCSW	07/28/09 13:56	WC090528-4	100		96	mg/L	96	80	120			
L77101-02DUP	DUP	07/28/09 14:39			770	791	mg/L				2.7	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

Project ID: OJ0A0G

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05272	mg/L	105.4	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.00022	0.00022			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.0501		.04946	mg/L	98.7	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.0501	U	.05024	mg/L	100.3	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.0501	U	.05162	mg/L	103	70	130	2.71	20	

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267611													
WG267611ICV	ICV	07/27/09 21:48	MS090604-1	.05		.05091	mg/L	101.8	90	110			
WG267611ICB	ICB	07/27/09 21:51				U	mg/L		-0.00022	0.00022			
WG267611LFB	LFB	07/27/09 21:57	MS090723-2	.05		.04987	mg/L	99.7	85	115			
L77032-01AS	AS	07/27/09 22:46	MS090723-2	.05	.0028	.05564	mg/L	105.7	70	130			
L77032-01ASD	ASD	07/27/09 22:49	MS090723-2	.05	.0028	.05708	mg/L	108.6	70	130	2.56	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG267598													
WG267598ICV	ICV	07/27/09 12:14	II090507-1	2		1.912	mg/L	95.6	95	105			
WG267598ICB	ICB	07/27/09 12:18				U	mg/L		-0.03	0.03			
WG267598LFB	LFB	07/27/09 12:30	II090713-2	.5		.533	mg/L	106.6	85	115			
L77073-01AS	AS	07/27/09 12:37	II090713-2	.5	U	.545	mg/L	109	85	115			
L77073-01ASD	ASD	07/27/09 12:40	II090713-2	.5	U	.55	mg/L	110	85	115	0.91	20	

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77100***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L77100-01	WG267804	Chloride	SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG267871	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).
	WG267950	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L77100-02	WG267804	Chloride	SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG267871	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).
	WG267950	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L77100
Date Received: 7/23/2009
Received By:
Date Printed: 7/24/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1692	4.7	14

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L77100
Date Received: 7/23/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L77100-01	MH-14		Y		Y							
L77100-02	MH-28		Y		Y							
L77100-03	MO-2007-3C									X		
L77100-04	MO-2007-6A									X		
L77100-05	MO-2007-6B									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L77100

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Rick Smith	E-mail: Rick Smith@URSCorp.com
Company: URS	Telephone: 520-407-2823

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ0A0G
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Ambient-TB							
MH-14	07-21-09 13:40	GW	5	X							
MH-28	07-20-09 12:25	GW	5	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 Rick Smith contains "VRP Suite" results with QC Summary.

UPS Tracking # 1Z 867 7E4 23 1000 6957

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[illegible]	7-22-09 15:40	[illegible]	7.23.09

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

L77100

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson
Company: HydroGeoChem
E-mail: dans@hginc.com
Telephone: 520-293-1500 ext 133

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

YES [ ] NO [ ]

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

YES [ ] NO [X]

PROJECT INFORMATION

Quote #:
Project/PO #: OJ0A0G
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375								
MO-2007-3C	07-22-09 13:02	GW	1	X								
MO-2007-6A	07-22-09 10:15	GW	1	X								
MO-2007-6B	07-22-09 09:21	GW	1	X								

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 6957

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	7-22-09 15:00	[signature]	7-23-09

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

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

Analytical Report

August 10, 2009

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

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

cc: Dan Simpson

Project ID: OJ0A0G
ACZ Project ID: L77224

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 29, 2009. This project has been assigned to ACZ's project number, L77224. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L77224. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after September 10, 2009. 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.

Sue Webber has reviewed and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2007-3B

ACZ Sample ID: ***L77224-01***
Date Sampled: *07/27/09 08:22*
Date Received: *07/29/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	37.2		*	mg/L	0.5	3	08/06/09 12:16	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G

ACZ Project ID: ***L77224***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG268158													
WG268158ICV	ICV	08/04/09 7:09	WI090615-9	50		49.79	mg/L	99.6	90	110			
WG268158ICB	ICB	08/04/09 7:30				U	mg/L		-1.5	1.5			
WG268158ICV1	ICV	08/06/09 2:04	WI090615-9	50		51.55	mg/L	103.1	90	110			
WG268158ICB1	ICB	08/06/09 2:25				U	mg/L		-1.5	1.5			
L77083-06AS	AS	08/06/09 8:24	WI090715-3	300	311	509.4	mg/L	66.1	90	110			M2
L77083-06DUP	DUP	08/06/09 8:45			311	376.8	mg/L				19.1	20	
WG268158ICV2	ICV	08/06/09 20:53	WI090615-9	50		51.05	mg/L	102.1	90	110			
WG268158ICB2	ICB	08/06/09 21:15				U	mg/L		-1.5	1.5			
WG268158LFB	LFB	08/06/09 21:36	WI090715-3	30		32.01	mg/L	106.7	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77224***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L77224-01	WG268158	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77224***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L77224
Date Received: 7/29/2009
Received By: lcp
Date Printed: 7/29/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA8934		5.6	12

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0G

ACZ Project ID: L77224
Date Received: 7/29/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L77224-01	MO-2007-3B									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: lcp

ACZ Laboratories, Inc. L-7224

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

YES [ ] NO [ ]

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

YES [ ] NO [x]

PROJECT INFORMATION

Quote #:

Project/PO #: OJ0A0G

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-3B	07-27-09 08:22	GW	1	x							

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 6984

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	7-28-09 16:30	[signature]	7-29-09 10:19

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

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

Analytical Report

August 24, 2009

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

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

cc: Dan Simpson

Project ID: OJ0A0G
ACZ Project ID: L77382

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 07, 2009. This project has been assigned to ACZ's project number, L77382. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L77382. 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 24, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: MO-2009-1

ACZ Sample ID: ***L77382-01***
Date Sampled: *07/29/09 11:00*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	97.7		*	mg/L	0.5	3	08/18/09 16:59	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: GV-1

ACZ Sample ID: ***L77382-02***
Date Sampled: *07/29/09 08:46*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	91.6		*	mg/L	0.5	3	08/18/09 17:20	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: GV-2

ACZ Sample ID: ***L77382-03***
Date Sampled: *07/29/09 09:20*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	44.3		*	mg/L	0.5	3	08/18/09 17:41	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: DUP20090729A

ACZ Sample ID: ***L77382-04***
Date Sampled: *07/29/09 00:00*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	96.4		*	mg/L	0.5	3	08/18/09 18:02	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: CW-9

ACZ Sample ID: ***L77382-05***
Date Sampled: *07/30/09 10:20*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	43.8		*	mg/L	0.5	3	08/18/09 19:05	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: CW-10

ACZ Sample ID: ***L77382-06***
Date Sampled: *07/30/09 09:15*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	49.2		*	mg/L	0.5	3	08/18/09 19:26	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G
Sample ID: DUP20090730A

ACZ Sample ID: ***L77382-07***
Date Sampled: *07/30/09 00:00*
Date Received: *08/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	49.4		*	mg/L	0.5	3	08/18/09 19:48	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita
Project ID: OJ0A0G

ACZ Project ID: ***L77382***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG268782													
WG268782ICV	ICV	08/17/09 15:56	WI090817-1	50.2		49.75	mg/L	99.1	90	110			
WG268782ICB	ICB	08/17/09 16:17				U	mg/L		-1.5	1.5			
WG268782ICV1	ICV	08/18/09 14:10	WI090817-1	50.2		49.55	mg/L	98.7	90	110			
WG268782ICB1	ICB	08/18/09 14:31				U	mg/L		-1.5	1.5			
WG268782LFB	LFB	08/18/09 14:52	WI090715-3	30		27.73	mg/L	92.4	90	110			
WG268782ICV2	ICV	08/19/09 14:03	WI090817-1	50.2		49.28	mg/L	98.2	90	110			
WG268782ICB2	ICB	08/19/09 14:24				U	mg/L		-1.5	1.5			
L77379-08DUP	DUP	08/19/09 15:06			156	164	mg/L				5	20	
L77381-01AS	AS	08/19/09 15:49	WI090715-3	300	400	651.5	mg/L	83.8	90	110			M2

FMI Gold & Copper - Sierrita ACZ Project ID: ***L77382***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L77382-01	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L77382-02	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L77382-03	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L77382-04	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L77382-05	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L77382-06	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L77382-07	WG268782	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0H

ACZ Project ID: L77382
Date Received: 8/7/2009
Received By:
Date Printed: 8/7/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA9006	3.5	14

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ0A0H

ACZ Project ID: L77382
Date Received: 8/7/2009
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L77382-01	MO-2009-1									X		
L77382-02	GV-1									X		
L77382-03	GV-2									X		
L77382-04	DUP20090729A									X		
L77382-05	CW-9									X		
L77382-06	CW-10									X		
L77382-07	DUP20090730A									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L77382

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

PROJECT INFORMATION

Quote #:
Project/PO #: OJ0A0H
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2009-1	07-29-09 11:00	GW	1	X							
GV-1	07-29-09 08:46	GW	1	X							
GV-2	07-29-09 09:20	GW	1	X							
DUP20090729A	07-29-09	GW	1	X							
CW-9	07-30-09 10:20	GW	1	X							
CW-10	07-30-09 09:15	GW	1	X							
DUP20090730A	07-30-09	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7009

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
T-Hilst	8-6-9 15:00		8-7-09 10:50

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

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

Analytical Report

September 28, 2009

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

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

cc: Dan Simpson

Project ID: OJ09LE
ACZ Project ID: L78340

Aaron Hilshorst:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 23, 2009. This project has been assigned to ACZ's project number, L78340. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L78340. 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 28, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: CW-6

ACZ Sample ID: ***L78340-01***
Date Sampled: *09/17/09 09:00*
Date Received: *09/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	70		*	mg/L	5	30	09/25/09 10:44	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: OJ09LE
Sample ID: NP-2

ACZ Sample ID: ***L78340-02***
Date Sampled: *09/17/09 14:52*
Date Received: *09/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	40		*	mg/L	1	5	09/25/09 10:37	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
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.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita
Project ID: OJ09LE

ACZ Project ID: ***L78340***

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG271029													
WG271029ICB	ICB	09/25/09 9:47				U	mg/L		-3	3			
WG271029ICV	ICV	09/25/09 9:47	WI090916-3	20.08		19.7	mg/L	98.1	90	110			
WG271029LFB	LFB	09/25/09 10:35	WI090505-3	10		10.2	mg/L	102	90	110			
L78340-01AS	AS	09/25/09 10:44	SO4TURB5	10	70	79.4	mg/L	94	90	110			
L78338-01DUP	DUP	09/25/09 11:59			2900	2820	mg/L				2.8	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L78340***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L78340
Date Received: 09/23/09 0:00
Received By: gac
Date Printed: 9/23/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA9357		1.2	14

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

Notes

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

Sample Receipt

FMI Gold & Copper - Sierrita
OJ09LE

ACZ Project ID: L78340
Date Received: 09/23/09 0:00
Received By: gac

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L78340-01	CW-6									X		
L78340-02	NP-2									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

L78340

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

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

Copy of Report to:

Name: Dan Simpson	E-mail: dans@hginc.com
Company: HydroGeoChem	Telephone: 520-293-1500 ext 133

Invoice to:

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

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

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

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

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

PROJECT INFORMATION

Quote #:

Project/PO #: OJ0A0G

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CW-6	09-17-09 09:00	GW	1	X							
NP-2	09-17-09 14:52	GW	1	X							

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7027

Rush Analysis

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
[signature]	9-22-09 15:30	[signature]	9-23-09 10:40

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

APPENDIX D

TIME SERIES GRAPHS OF SULFATE CONCENTRATION OVER TIME

TABLE OF CONTENTS

TABLE

FIGURES

TABLE

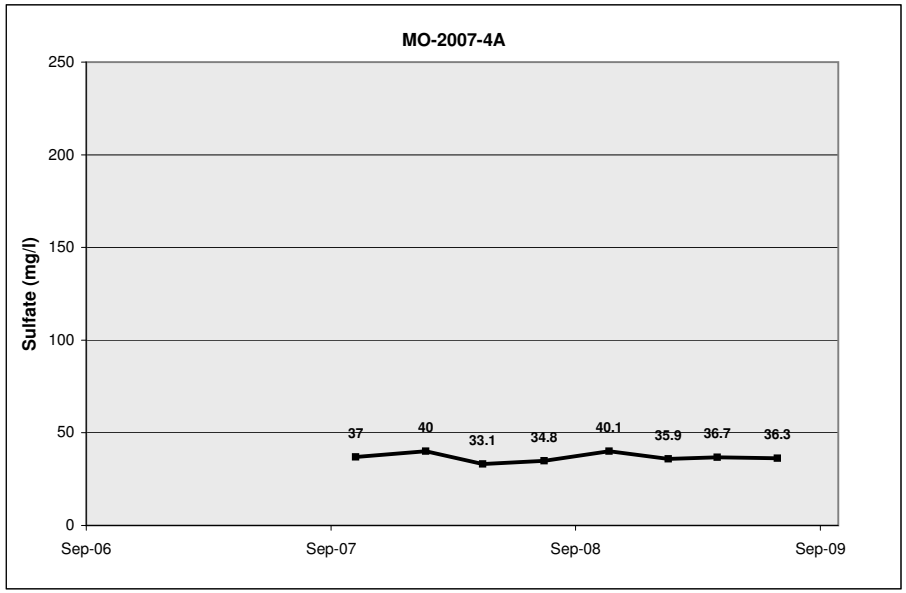
TABLE D.1
Sulfate Concentration Over Time

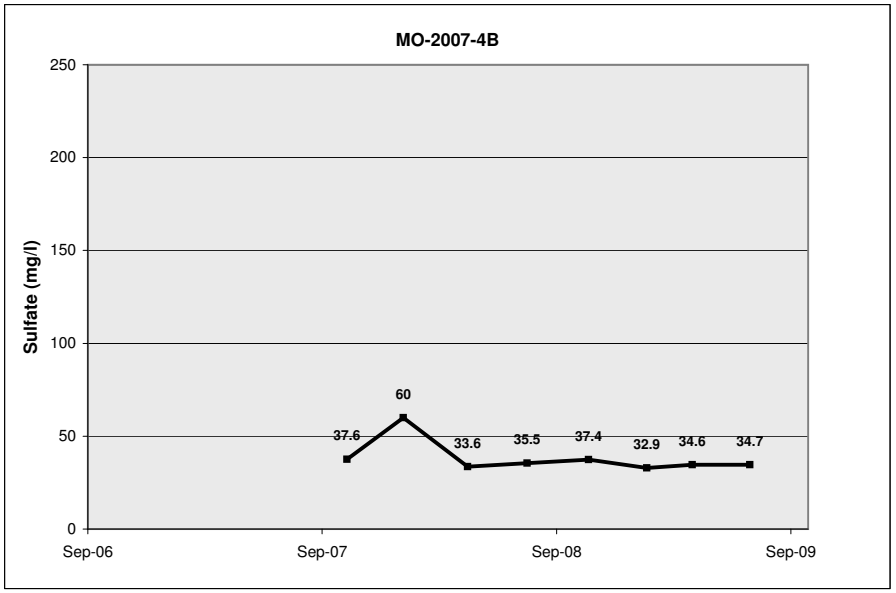
Well ID	Date and dissolved sulfate concentration reported in milligrams per liter (mg/L)											
CW-6	12/04/06	01/03/07	05/14/07	07/10/07	10/02/07	01/08/08	04/15/08	07/08/08	10/07/08	02/06/09	04/22/09	09/17/09
	46.2	49.2	68.7	57.6	54.2	48.9	51.2	47.9	51.5	48.2	47.9	70
CW-9	12/04/06	01/03/07	05/14/07	07/10/07	10/02/07	01/08/08	04/15/08	07/08/08	10/07/08	02/06/09	04/22/09	07/30/09
	44.5	44.9	47.8	46.7	46.4	47.3	43.7	44.1	43.5	45.1	44.3	43.8
CW-10	12/04/06	01/24/07	05/14/07	07/10/07	10/02/07	01/08/08	04/15/08	07/08/08	10/07/08	02/06/09	04/22/09	07/30/09
	37.2	48.6	52.8	51.7	47.7	45.3	50.8	50.5	48.3	51.3	47.9	49.2
GV-01-GVDWID		01/09/07	04/10/07	07/11/07	10/03/07	01/07/08	04/16/08	07/07/08	11/25/08	03/03/09	04/22/09	07/29/09
		40.9	43.2	41.5	43.8	45.7	44.1	45.2	39	42.3	40.6	44.3
GV-02-GVDWID		01/09/07	04/10/07	07/11/07	10/03/07	01/07/08	04/16/08	07/07/08	11/25/08	02/04/09	04/22/09	07/29/09
		103	106	98	100	98	97	93.2	93.5	98.8	79.5	91.6
ESP-1	12/04/06	01/03/07	05/14/07	07/10/07	10/12/07	01/23/08	04/18/08	07/25/08	10/30/08	01/29/09	04/16/09	
	262	242	113	94	110	100	102	104	121	113	130	NS
ESP-2	12/04/06	01/03/07	05/14/07	07/10/07	10/12/07	01/23/08	04/18/08	07/25/08	10/30/08	01/29/09	04/16/09	
	29.6	31.3	28.4	28.6	30	30	27.6	26.8	30.1	27.8	28.2	NS
ESP-3	12/04/06	01/03/07	05/14/07	07/10/07	10/12/07	01/23/08	04/18/08	07/25/08	10/30/08	01/29/09	04/16/09	
	36.2	37.5	36.6	36.6	40	30	35.7	34	36.8	35.2	35.3	NS
MO-2007-1A				08/08/07	10/09/07	01/24/08	04/09/08	07/14/08	10/17/08	01/16/09	04/01/09	07/01/09
				19.2	20	20	21	16.6	17.9	18.1	18.2	16.3
MO-2007-1B				08/02/07	10/09/07	01/24/08	04/09/08	07/14/08	10/17/08	01/16/09	04/01/09	07/01/09
				18.9	30	30	35	39.8	54.3	69.7	84.1	99
MO-2007-1C				07/31/07	10/09/07	01/24/08	04/09/08	07/14/08	10/21/08	01/16/09	04/01/09	07/01/09
				112	90	140	149	165	146	233	229	236
NP-2			06/04/07	08/13/07	11/06/07	01/11/08	04/17/08	07/11/08	10/09/08	02/09/09	04/24/09	09/17/09
			41.2	41.7	41.7	43.5	40	40.5	39.7	42.4	32.1	40
MO-2007-3B				09/10/07	10/09/07	01/21/08	04/16/08	07/14/08	10/22/08	01/19/09	04/01/09	07/27/09
				38	40	40	37	37.8	42.4	36.9	38.2	37.2
MO-2007-3C				07/05/07	10/10/07	01/21/08	04/15/08	07/14/08	10/21/08	01/19/09	04/01/09	07/22/09
				136	110	130	127	126	103	113	115	107
MO-2007-4A					10/09/07	01/22/08	04/16/08	07/17/08	10/22/08	01/19/09	04/02/09	07/01/09
					37	40	33.1	34.8	40.1	35.9	36.7	36.3
MO-2007-4B					10/11/07	01/07/08	04/16/08	07/18/08	10/22/08	01/21/09	04/02/09	07/01/09
					37.6	60	33.6	35.5	37.4	32.9	34.6	34.7
MO-2007-4C				08/16/07	10/12/07	01/22/08	04/16/08	07/18/08	10/22/08	01/21/09	04/02/09	07/01/09
				78.7	80.1	80	80	78.6	84.9	78.5	81	82.7
MO-2007-6A					10/02/07	01/22/08	04/18/08	07/24/08	10/23/08	01/22/09	04/02/09	07/22/09
					26.5	30	20.5	16.9	18.6	26.9	23.7	19.8
MO-2007-6B					10/04/07	01/22/08	04/17/08	07/24/08	10/23/08	01/22/09	04/02/09	07/22/09
					93.6	80	90.4	81.5	63.2	84.5	75.7	63.5
MO-2009-1											04/24/09	07/29/09
											62.1	97.7

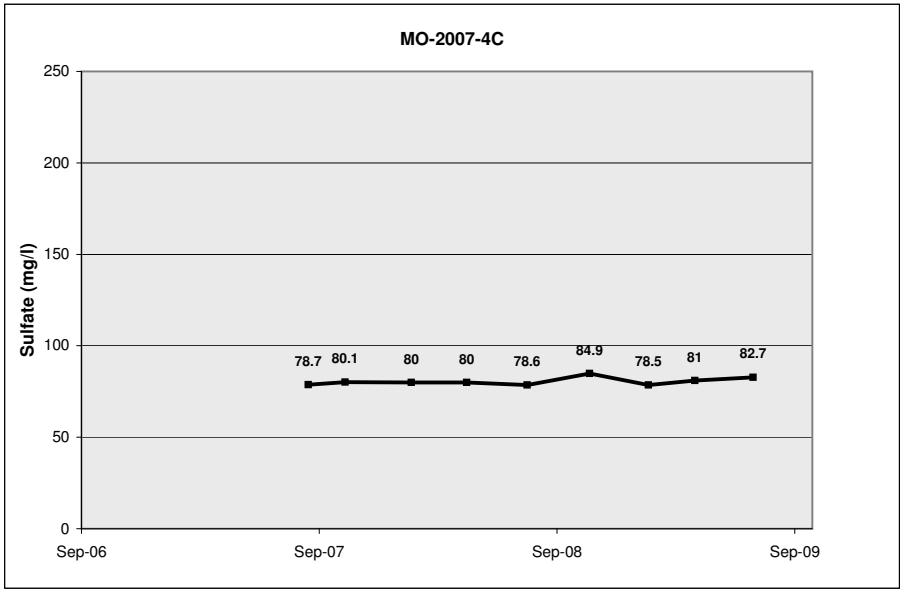
NS = Not Sampled

FIGURES

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







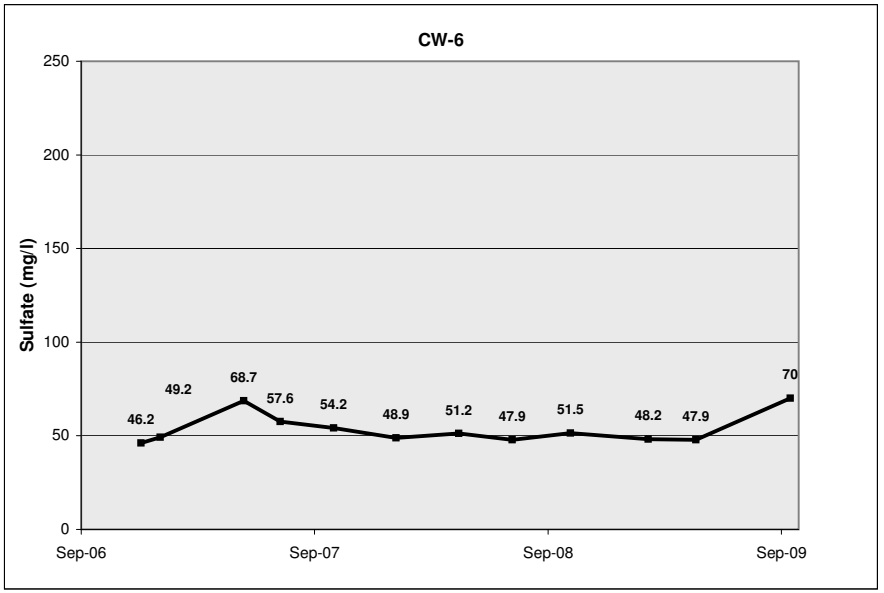
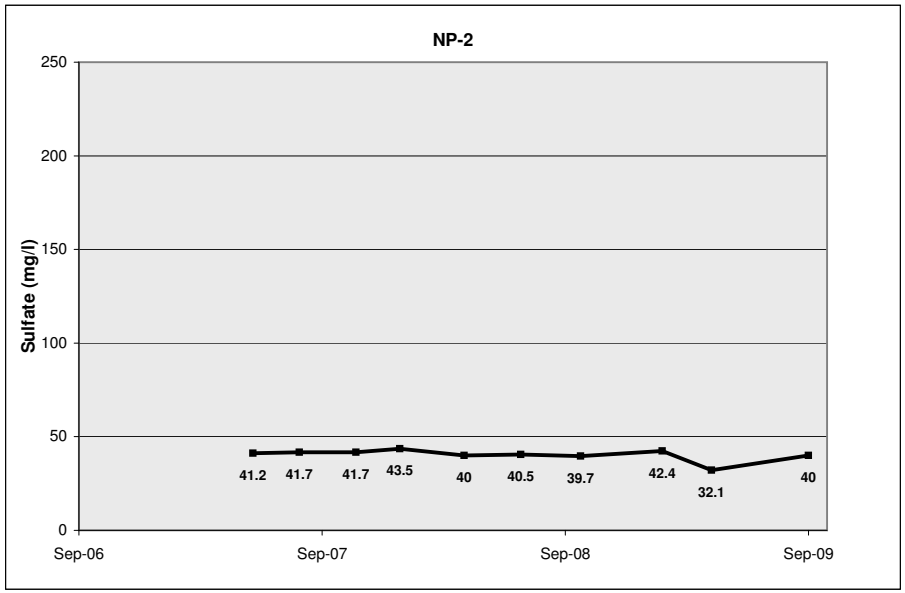
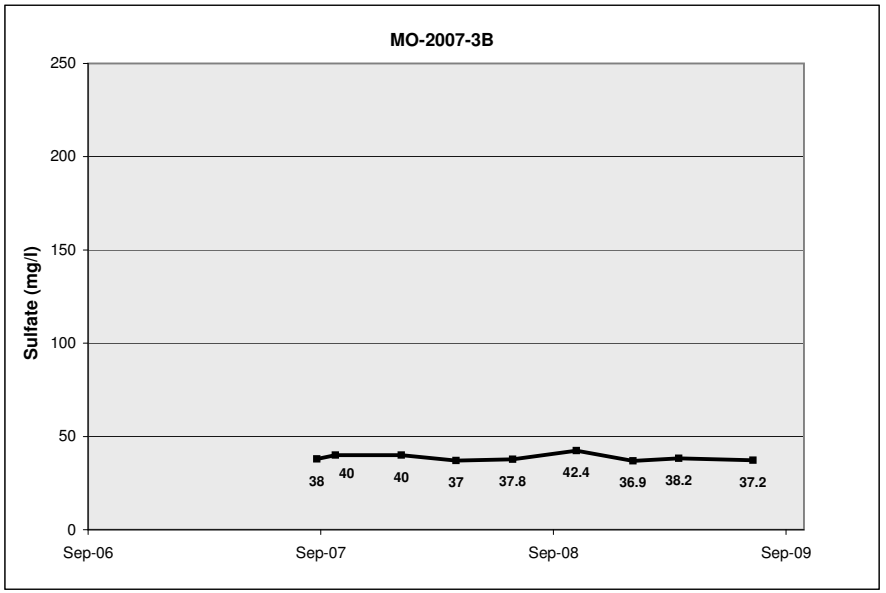
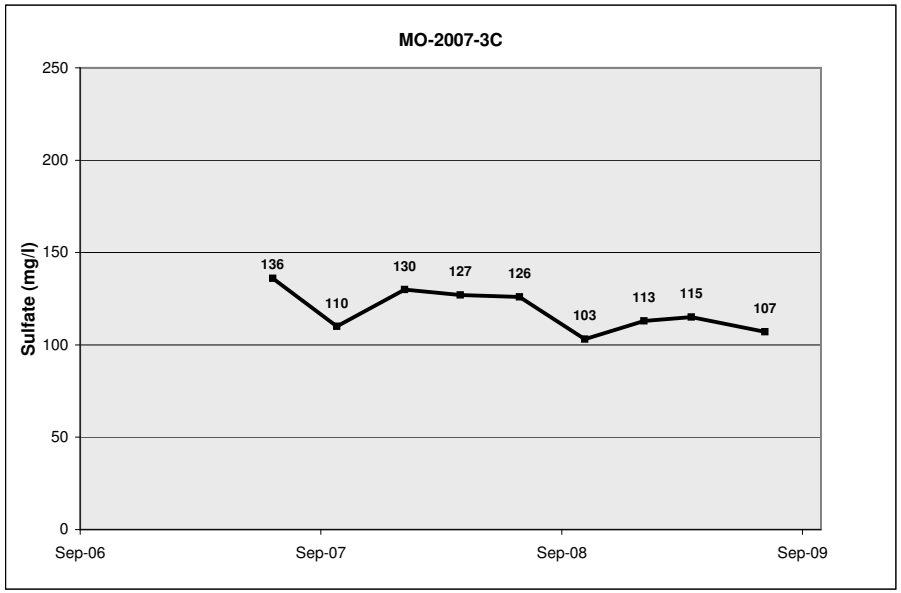


FIGURE D.2
SULFATE CONCENTRATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND CW-9







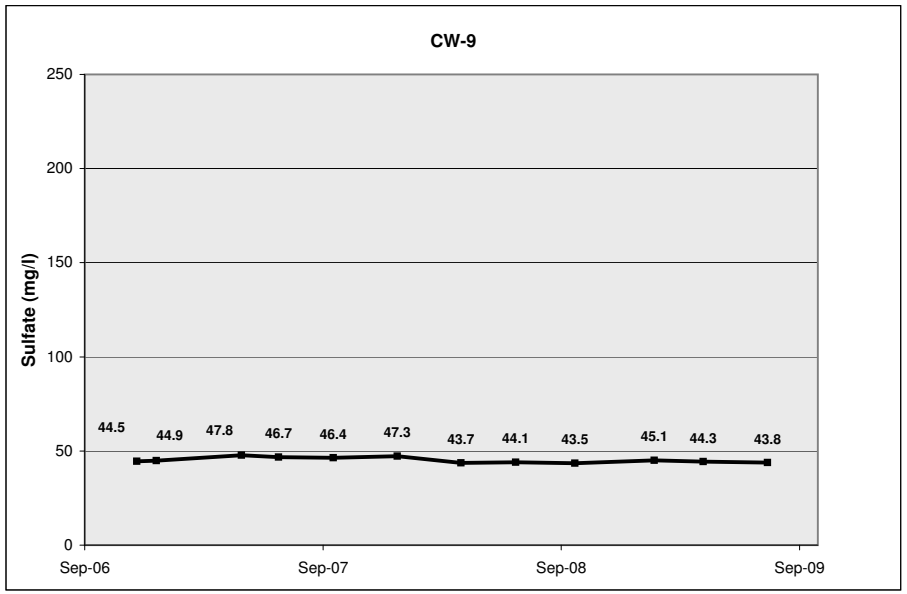
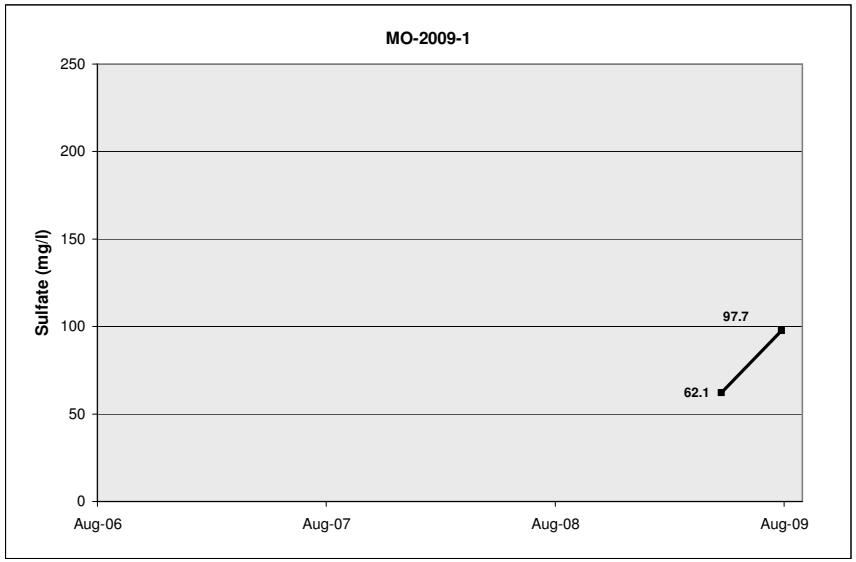


FIGURE D.3
SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2009-1 AND CW-10



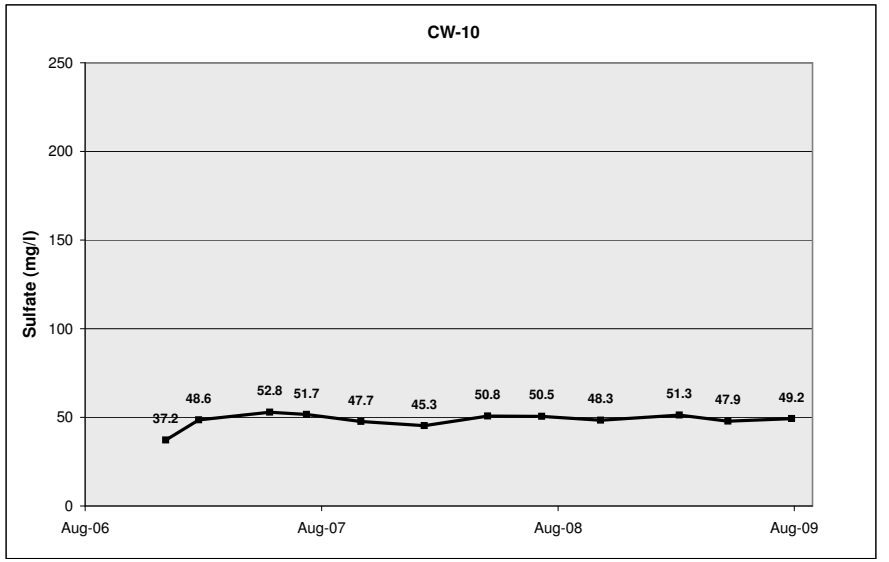
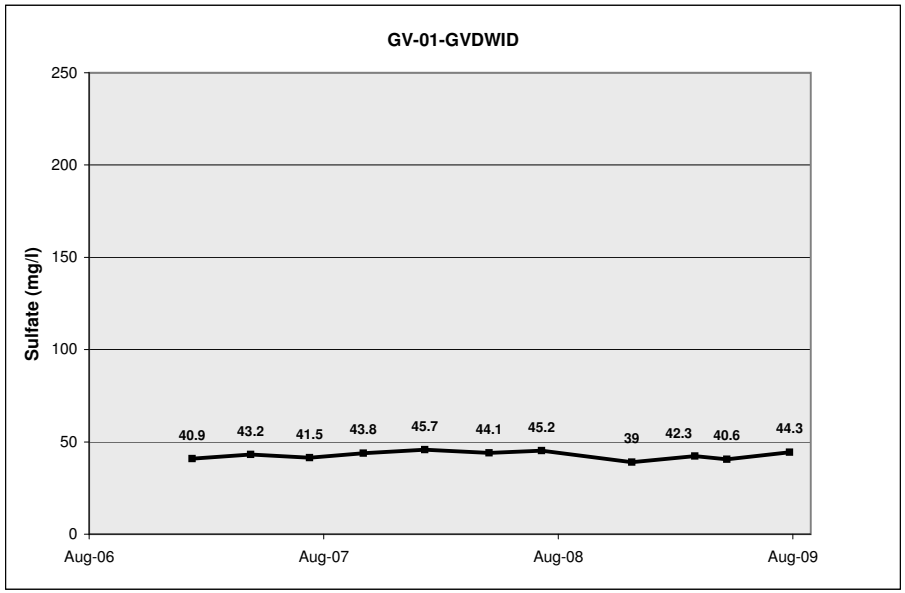
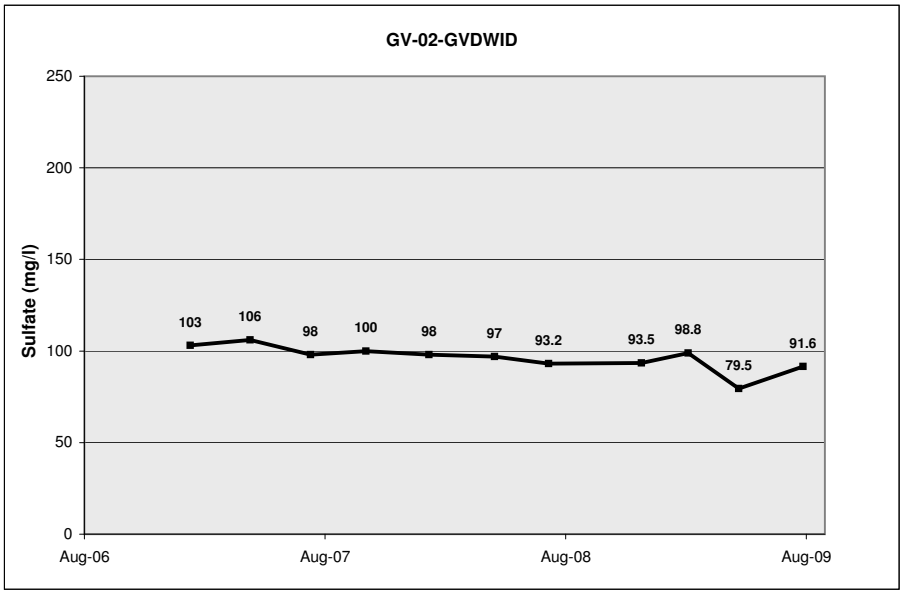
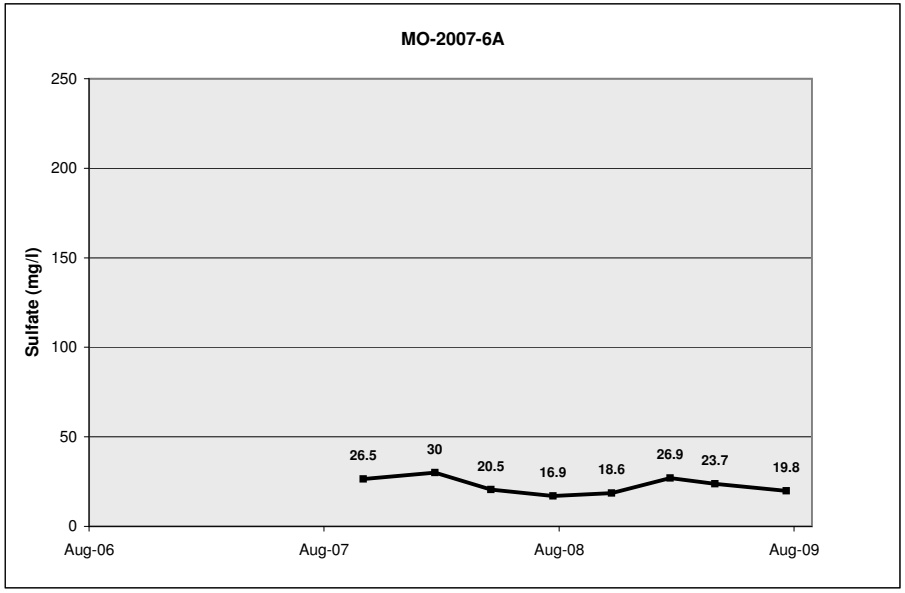


FIGURE D.4
SULFATE CONCENTRATION OVER TIME FOR WELLS
GV-01-GVDWID, GV-02-GVDWID, MO-2007-6A, AND MO-2007-6B







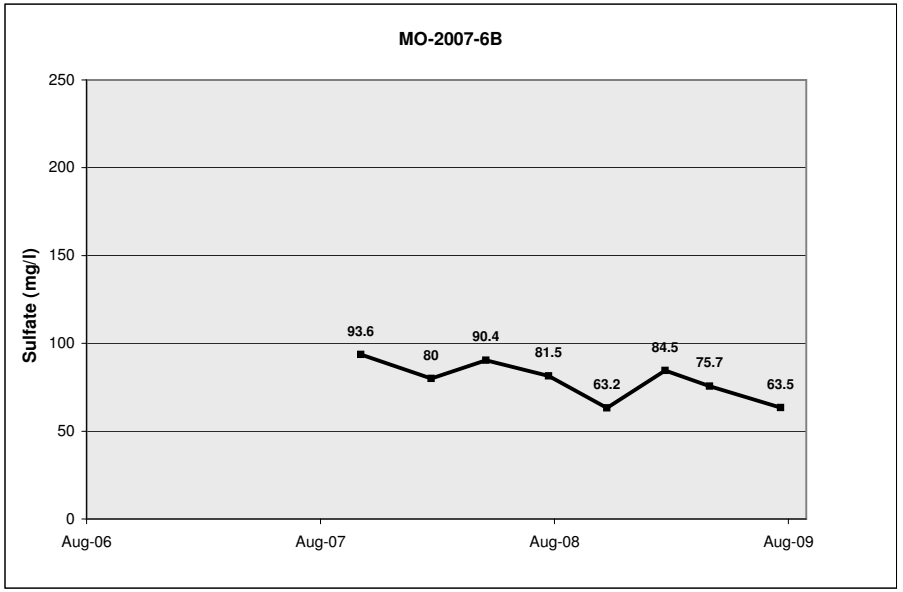
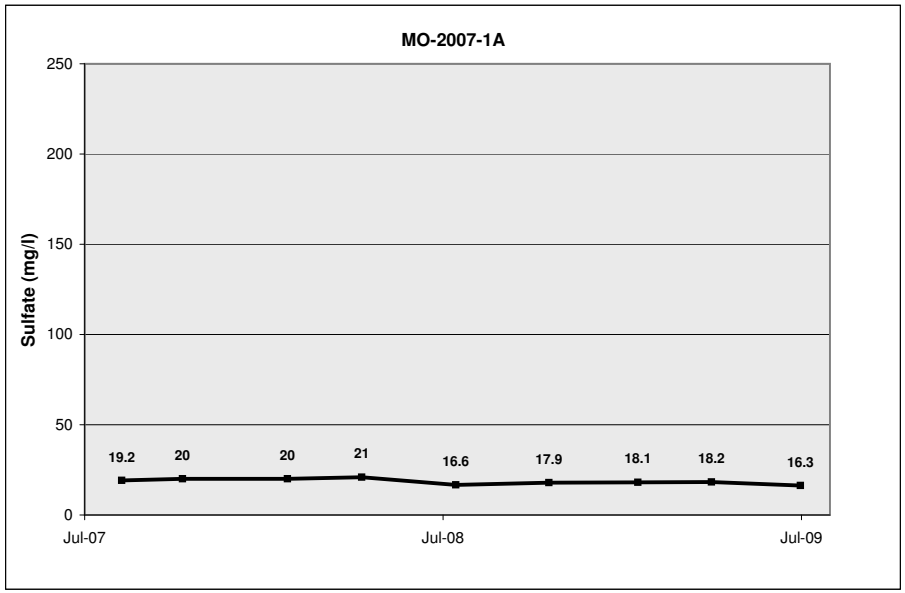
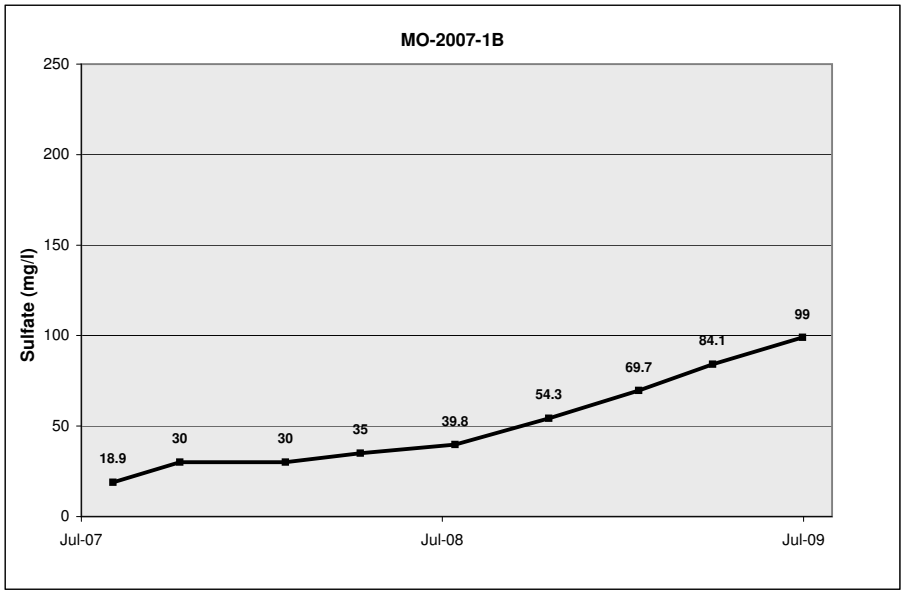


FIGURE D.5
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, AND MO-2007-1C





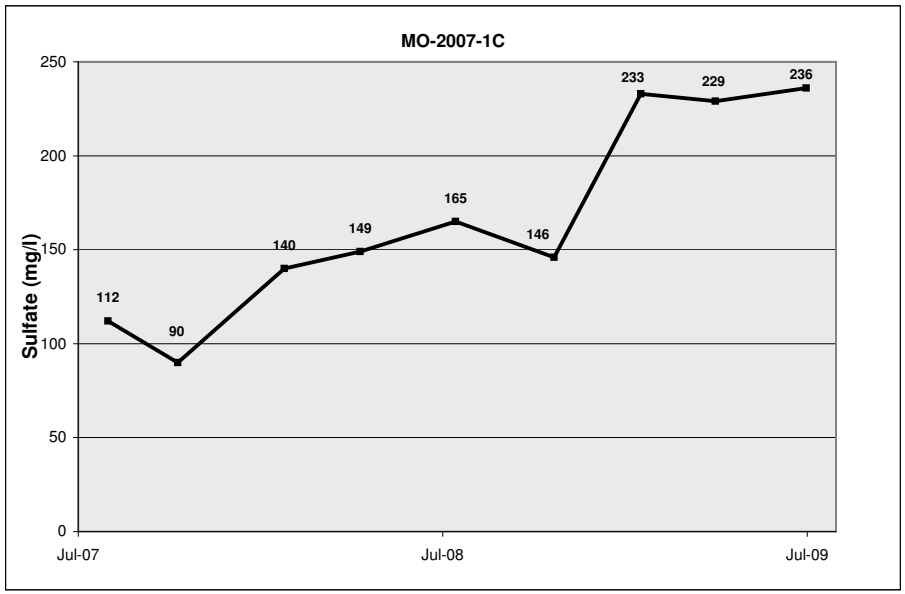


FIGURE D.6
SULFATE CONCENTRATION OVER TIME FOR WELLS
ESP-1, ESP-2, AND ESP-3