



Freeport-McMoRan Sierrita Inc.
6200 W. Duval Mine Rd.
PO Box 527
Green Valley, Arizona 85622-0527

September 29, 2008

Via Certified Mail #7002 1000 0005 6776 3152
Return Receipt Requested

Ms. Cynthia S. Campbell
Arizona Department of Environmental Quality
Water Quality Compliance Section
1110 West Washington Street
Phoenix, Arizona 85007-2935

Re: **Groundwater Monitoring Report,**
Third Quarter 2008, Mitigation Order on Consent, Docket No. P-50-06

Dear Ms. Campbell:

Freeport-McMoRan Sierrita Inc. ("Sierrita") submits three copies of the attached Quarterly Groundwater Monitoring Report that provides the results of groundwater monitoring conducted during the third quarter of 2008 in the vicinity of the Sierrita Tailing Impoundment. This document was prepared by Hydro Geo Chem, Inc. as described in the Work Plan for Mitigation Order on Consent, Docket No. P-50-06.

Please do not hesitate to contact Mr. Stuart Brown at (503) 675-5252 or myself at (520) 648-8857 if you have any question regarding this submittal.

Sincerely,

A handwritten signature in black ink that reads "Ned Hall".

E. L. (Ned) Hall
Chief Environmental Engineer

ELH:ms
20080929-001
Attachment

xc: John Broderick, Sierrita Operations
Chad Fretz, Sierrita Operations
Ray Lazuk, Freeport-McMoRan Copper & Gold Inc.
Stuart Brown, Bridgewater Group, Inc.

**THIRD QUARTER 2008
GROUNDWATER MONITORING REPORT
TASK 2.2 OF AQUIFER CHARACTERIZATION PLAN
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
Tucson, Arizona 85705
(520) 293-1500

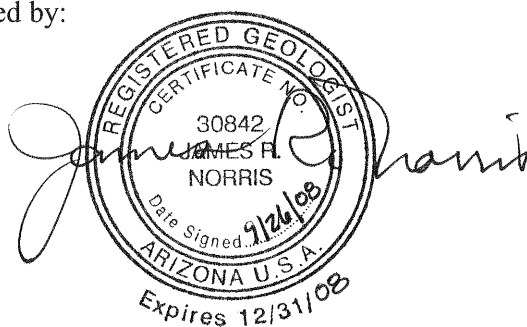
September 26, 2008

**THIRD QUARTER 2008
GROUNDWATER MONITORING REPORT
TASK 2.2 OF AQUIFER CHARACTERIZATION PLAN
MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06
PIMA COUNTY, ARIZONA**

Prepared for:

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

Approved by:



James R. Norris
Arizona Registered Geologist No. 30842

Prepared by:

Daniel R. Simpson
Senior Hydrogeologist

September 26, 2008

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B	Analytical Data Reports from ACZ Laboratories, Inc.
C	Hydro Geo Chem, Inc. Groundwater Sampling Forms
D	Time Series Graphs of Sulfate Concentration and Groundwater Elevation

1. INTRODUCTION

This data report was prepared for Freeport-McMoRan Sierrita Inc. (Sierrita), and provides the results of groundwater monitoring conducted in the third quarter of 2008 in the vicinity of the Sierrita Tailing Impoundment (STI). Groundwater monitoring was conducted by Sierrita pursuant to Task 2.2 of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2006) to characterize sulfate in the vicinity of the STI. The Work Plan was submitted to and approved by Arizona Department of Environmental Quality (ADEQ) pursuant to the Mitigation Order on Consent Docket No. P-50-06. HGC prepared this groundwater monitoring report on behalf of Sierrita.

1.1 Scope of Groundwater Monitoring

The scope of the groundwater monitoring program is described in Sections 3.3.2 and Appendix G of the Work Plan (HGC, 2006). Groundwater monitoring for Task 2.2 consists of water elevation measurement and collection of groundwater samples from wells in the vicinity of the STI.

1.1.1 Groundwater Monitoring for Task 2.2

The Work Plan identifies two purposes for the groundwater monitoring program required in Task 2.2: plume monitoring and regional monitoring. Plume monitoring is conducted

quarterly at wells that are proximal to the sulfate plume in order to track the plume's location in the aquifer. Regional monitoring to characterize regional hydrologic conditions using wells that are outside the area of the sulfate plume was completed in the third quarter of 2007 (HGC, 2007). This report presents the results of plume monitoring conducted during the third quarter of 2008. Pursuant to the Work Plan, the only constituent of interest for quarterly plume monitoring is sulfate.

Table 1 lists wells identified in the Work Plan for quarterly monitoring, their availability for sampling in the third quarter of 2008, and their sampling status. As discussed in the Work Plan, Table 1 consists of wells that are under the control of Sierrita and others that are not. Sierrita agreed to contact owners of private wells and wells owned by water companies identified in the Work Plan for sampling in order to obtain access for sampling. The Work Plan acknowledged that access to some wells may not be permitted by well owners and that some wells may be inappropriate for sampling due to their construction characteristics. Table 1 also includes a list of alternate wells identified by the Work Plan for sampling that have been used in place of wells that were unable to be sampled.

Analytical data for plume monitoring during the third quarter of 2008 were obtained from two sources: Sierrita and HGC. Sierrita collected groundwater samples at wells under its control and HGC collected groundwater samples at wells not under the control of Sierrita during July 2008.

Groundwater sampling and analysis methods used by Sierrita and HGC are described in the Quality Assurance Project Plan (QAPP) contained in Appendix E of the Work Plan (HGC, 2006). Results of groundwater monitoring for Task 2.2 are presented in Section 2.1.

2. GROUNDWATER MONITORING RESULTS

2.1 Results of Monitoring for Task 2.2

Analytical results and groundwater elevation data for the third quarter of 2008 are tabulated in Table 2 and Table 3, respectively. Figure 1 shows the concentrations of dissolved sulfate in the wells sampled in the third quarter 2008. Comparison of dissolved and total sulfate concentrations in Table 2 indicates negligible difference between the two measurements. The highest sulfate concentration measured at co-located wells was used for concentration contouring. Figure 2 shows groundwater elevations in the third quarter 2008. 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 were not used to estimate groundwater elevation contours for Figure 2 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 and HGC during the third quarter of 2008, and is included in Appendix A.

Analytical laboratory reports for samples collected by Sierrita and HGC in the third quarter of 2008 are provided in portable document format on the compact disc in Appendix B. Copies of groundwater sampling forms for samples collected by HGC are in Appendix C.

As determined by the analytical data verification review, all data for samples collected in the third quarter of 2008 by HGC and Sierrita are of acceptable quality for use in the aquifer characterization being conducted pursuant to the Work Plan.

3. DISCUSSION

This data report provides the results of groundwater monitoring conducted in the vicinity of the STI for the third quarter of 2008. As presented in Table 1, during this monitoring period 76 wells were identified for quarterly quality sampling and 69 wells were identified for water level monitoring. Groundwater samples were collected from 75 plume area wells and depths to water measurements were collected at 83 wells.

Groundwater samples and water level measurements were not collected from all the wells identified in the Work Plan for a variety of reasons, including owner limitations on access, unsuitable well construction, inability to contact the owner, obstruction in well, or a well no longer existing. The specific reason(s) for not sampling these wells are provided in Table 1. In some cases, alternate wells were identified and sampled as described in Table 1. Overall, groundwater monitoring conducted during the third quarter of 2008 is deemed to have met the objective of identifying the location of the sulfate plume from STI.

3.1 Sulfate Distribution

Figure 1 shows the distribution of sulfate concentrations. The concentration contours shown in Figure 1 are inferred assuming that sulfate concentrations in the aquifer are spatially correlated, although a strict linear interpolation was not applied. Sulfate concentration contours of 50, 100, 250, 500, 1000, and 1500 milligrams per liter (mg/L) are shown as requested by

ADEQ (2006). The contours are based on the highest sulfate concentration measured in co-located wells.

Based on the sulfate concentration data on Figure 1, 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.

3.2 Groundwater Elevation

Groundwater elevations are shown on Figure 2. 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 2008 water elevations with those observed in previous quarters indicates no substantive difference in groundwater elevations and consequent 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.

The water elevations in co-located wells screened at different depths vary by less than five feet in the north part of the study area. In the south half of the study area, the deepest screened interval at co-located wells at MH-13, MO-2007-5, and MO-2007-6 have lower water elevations than the more shallow wells. The vertical water level differences as calculated

between the shallowest and deepest screened intervals at the MH-13, MO-2007-5, and MO-2007-6 wells range from 7.34 to 13.25 feet.

3.3 Time Series Graphs of Sulfate Concentration and Groundwater Elevation

Time series graphs of sulfate concentration and groundwater elevation for the ESP-, CW- MO-, and GVDWID wells in the vicinity of the edge of the plume, and wells MH-28 and MH-29 near the interceptor wellfield are presented in Appendix D. Because of variability in the sulfate and water elevation data, assessment of trends is somewhat subjective and should be considered provisional subject to additional verification. Inspection of the time series graphs indicates that sulfate concentrations appear to increase gradually over time in CW-7, GV-1-GVDWID, ESP-4, MO-2007-1B, MO-2007-1C, and MH-29, and decrease in ESP-1, ESP-2, and MO-2007-2. In most cases the apparent increases and decreases in concentration are a relatively small percentage (less than 15%) of the measured values. The largest percentage changes over time in sulfate concentration are observed in MO-2007-1B, MO-2007-1C which increased from 18.9 mg/L to 39.8 mg/L and 112 mg/L to 165 mg/L, respectively, and in ESP-1 which decreased from 262 mg/L to 94 mg/L in late 2006 and early 2007. The apparent sulfate concentration trends need to be verified by additional monitoring. Groundwater elevations are also variable over time, making interpretation of seasonal or long-term trends difficult. In general, water level elevation data for active production wells show the largest range of variation over time (up to approximately 25 feet in CW-10), whereas the range of groundwater elevation change over time in monitoring wells tends to be approximately 6 feet or less. Sulfate concentration and groundwater elevation data for the time series graphs is presented in Table D.1.

4. REFERENCES

- Arizona Department of Environmental Quality. 2006. Correspondence from Robert Casey to John Brack, Regarding: Mitigation Order on Consent, Docket P-50-06-Work Plan Response. September 22, 2006.
- Hydro Geo Chem, Inc. (HGC). 2006. Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Phelps Dodge Sierrita Tailing Impoundment, Pima County, Arizona. August 11, 2006, revised October 31, 2006.
- HGC. 2007. Third Quarter 2007. Groundwater Monitoring Report, Tasks 2.2, 2.3, and 2.4 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-50-06. September 26, 2007.

TABLES

TABLE 1
Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for Third Quarter 2008

Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q3-2008 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?		
WELLS FOR QUARTERLY [PLUME] MONITORING CONTROLLED BY SIERRITA										
ESP-1	623102	Sierrita	Plume Monitoring	1020	Q	Q	NO	YES	Water quality sample collected in July 2008; obstruction in well prevented water level measurement	
ESP-2	623103	Sierrita	Plume Monitoring	1044	Q	Q	YES	YES	Water quality sample collected July 2008	
ESP-3	623104	Sierrita	Plume Monitoring	1043	Q	Q	NO	YES	Water quality sample collected in July 2008; obstruction in well prevented water level measurement	
ESP-4	623105	Sierrita	Plume Monitoring	1045	Q	Q	YES	YES	Water quality sample collected in July 2008	
ESP-5	623106	Sierrita	Plume Monitoring	950	Q	-	YES	NO	Well identified for water level measurement only	55-515867
IW-1	623129	Sierrita	Plume Monitoring	855	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-2	623130	Sierrita	Plume Monitoring	1035	Q	Q	NO	NO	Well abandonment planned	
IW-2A	216464	Sierrita	Plume Monitoring	1041	Q	Q	NO	YES	Water quality sample collected July in 2008; no access to well casing to collect water level measurement	
IW-3A	623131	Sierrita	Plume Monitoring	1047	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-4	623132	Sierrita	Plume Monitoring	946	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-5	623133	Sierrita	Plume Monitoring	956	-	Q	NO	YES	Water quality sample collected in July 2008; obstruction in well prevented water level measurement	
IW-6A	545565	Sierrita	Plume Monitoring	492	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-8	508236	Sierrita	Plume Monitoring	783	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-9	508238	Sierrita	Plume Monitoring	853	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-10	508237	Sierrita	Plume Monitoring	831	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-11	508235	Sierrita	Plume Monitoring	605	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-12	545555	Sierrita	Plume Monitoring	625	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-13	545556	Sierrita	Plume Monitoring	495	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-14	545557	Sierrita	Plume Monitoring	550	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-15	545558	Sierrita	Plume Monitoring	548	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-16	545559	Sierrita	Plume Monitoring	470	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-17	545560	Sierrita	Plume Monitoring	502	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-18	545561	Sierrita	Plume Monitoring	508	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-19	545562	Sierrita	Plume Monitoring	544	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-20	545563	Sierrita	Plume Monitoring	506	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-21	545564	Sierrita	Plume Monitoring	620	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-22	200554	Sierrita	Plume Monitoring	590	-	Q	YES	YES	Water quality sample collected in July 2008	
IW-23	200555	Sierrita	Plume Monitoring	964	-	Q	NO	YES	Water quality sample collected in July 2008; obstruction in well prevented water level measurement	
IW-24	200556	Sierrita	Plume Monitoring	880	-	Q	YES	YES	Water quality sample collected in July 2008	

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Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q3-2008 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?		
MH-1	803629	Sierrita	Plume Monitoring	520	Q	-	YES	NO	Well identified for water level measurement only	
MH-3	803630	Sierrita	Plume Monitoring	535	Q	-	YES	NO	Well identified for water level measurement only	
MH-4	803631	Sierrita	Plume Monitoring	540	Q	-	NO	NO	Obstruction in well prevented water level measurement	
MH-5	803632	Sierrita	Plume Monitoring	640	Q	-	YES	NO	Well identified for water level measurement only	
MH-6	803633	Sierrita	Plume Monitoring	960	Q	-	YES	NO	Well identified for water level measurement only	
MH-7	803634	Sierrita	Plume Monitoring	1100	Q	-	YES	NO	Well identified for water level measurement only	
MH-9	803635	Sierrita	Plume Monitoring	1400	Q	-	YES	NO	Well identified for water level measurement only	
MH-10	803636	Sierrita	Plume Monitoring	600	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-11	803637	Sierrita	Plume Monitoring	820	Q	Q ¹	YES	YES	Water quality sample collected in July 2008	
MH-12	803638	Sierrita	Plume Monitoring	800	Q	Q ¹	YES	YES	Water quality sample collected in July 2008	
MH-13A	904071	Sierrita	Plume Monitoring	660	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-13B	904072	Sierrita	Plume Monitoring	960	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-13C	904073	Sierrita	Plume Monitoring	1360	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-14	528098	Sierrita	Plume Monitoring	561	Q	-	YES	NO	Well identified for water level measurement only	
MH-15E	528094	Sierrita	Plume Monitoring	467	Q	-	YES	NO	Well identified for water level measurement only	
MH-15W	528093	Sierrita	Plume Monitoring	466	Q	-	YES	NO	Well identified for water level measurement only	
MH-16E	528100	Sierrita	Plume Monitoring	460	Q	-	YES	NO	Well identified for water level measurement only	
MH-16W	528099	Sierrita	Plume Monitoring	460	Q	-	YES	NO	Well identified for water level measurement only	
MH-24	563799	Sierrita	Plume Monitoring	468	Q	-	YES	NO	Well identified for water level measurement only	
MH-25A	201528	Sierrita	Plume Monitoring	530	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-25B	208429	Sierrita	Plume Monitoring	680	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-25C	208426	Sierrita	Plume Monitoring	1101	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-26A	201527	Sierrita	Plume Monitoring	538	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-26B	208427	Sierrita	Plume Monitoring	735	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-26C	208428	Sierrita	Plume Monitoring	910	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-28	903648	Sierrita	Plume Monitoring	490	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-29	903649	Sierrita	Plume Monitoring	475	Q	Q	YES	YES	Water quality sample collected in July 2008	
MH-30	903884	Sierrita	Plume Monitoring	920	Q	Q	YES	YES	Water quality sample collected in July 2008	

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Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for Third Quarter 2008

Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q3-2008 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?		
MO-2007-1A	907342	Sierrita	Plume Monitoring	610	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-1B	907210	Sierrita	Plume Monitoring	910	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-1C	907209	Sierrita	Plume Monitoring	1190	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-2	906765	Sierrita	Plume Monitoring	685	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-3B	906816	Sierrita	Plume Monitoring	950	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-3C	906817	Sierrita	Plume Monitoring	1330	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-4A	907213	Sierrita	Plume Monitoring	570	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-4B	907212	Sierrita	Plume Monitoring	950	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-4C	907211	Sierrita	Plume Monitoring	1140	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-5B	907456	Sierrita	Plume Monitoring	970	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-5C	907457	Sierrita	Plume Monitoring	1360	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-6A	907607	Sierrita	Plume Monitoring	620	Q	Q	YES	YES	Water quality sample collected in July 2008	
MO-2007-6B	907606	Sierrita	Plume Monitoring	950	Q	Q	YES	YES	Water quality sample collected in July 2008	
PZ-7	561870	Sierrita	Plume Monitoring	155	Q	Q	YES	YES	Water quality sample collected in July 2008	
PZ-8	561866	Sierrita	Plume Monitoring	280	Q	Q	YES	YES	Water quality sample collected in July 2008	
PZ-9	561859	Sierrita	Plume Monitoring	230	Q	Q	NO	NO	Piezometer is Dry	
WELLS FOR QUARTERLY [PLUME] MONITORING NOT CONTROLLED BY SIERRITA										
1350	ND	TBPI	Plume Monitoring	ND	Q	-	YES	NO	Well identified for water level measurement only	
CC OF GV	501760	CC of GV	Plume Monitoring	955	Q	Q	YES	YES	Water quality sample collected in July 2008	55-640274
CW-3	627483	CWC	Plume Monitoring	501	Q	Q	YES	YES	Water quality sample collected in July 2008	
CW-6	627485	CWC	Plume Monitoring	840	Q	Q	YES	YES	Water quality sample collected in July 2008	
CW-7	502546	CWC	Plume Monitoring	1065	Q	Q	YES	YES	Water quality sample collected in July 2008	
CW-8	543600	CWC	Plume Monitoring	1200	Q	Q	YES	YES	Water quality sample collected in July 2008	
CW-9	588121	CWC	Plume Monitoring	1000	Q	Q	YES	YES	Water quality sample collected in July 2008	
CW-10	207982	CWC	Plume Monitoring	1140	Q	Q	YES	YES	Water quality sample collected in July 2008	
GV-01-GVDWID	603428	GVDWID	Plume Monitoring	645	Q	Q	YES	YES	Water quality sample collected in July 2008	
GV-02-GVDWID	603429	GVDWID	Plume Monitoring	560	Q	Q	YES	YES	Water quality sample collected in July 2008	
GV-SI-GVDWID	208825	GVDWID	Plume Monitoring	650	Q	Q	YES	YES	Water quality sample collected in July 2008	
HAVEN GOLF	515867	Haven Golf	Plume Monitoring	500	Q	Q	NO	YES	Water quality sample collected in July 2008; obstruction in well prevented water level measurement	55-623106

TABLE 1
Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for Third Quarter 2008

Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Work Plan Specification		Q3-2008 Monitoring		Status	Substitute Well
					Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?		
I-9	608526	TBPI	Plume Monitoring	900	Q	Q	NO	NO	Well abandonment completed October 2007	None
I-10	608525	TBPI	Plume Monitoring	932	Q	Q	YES	YES	Water quality sample collected in July 2008	
M-6	87388	TBPI	Plume Monitoring	660	Q	Q	NO	NO	Well unavailable for monitoring	M-9, 55-501652
M-8	87390	TBPI	Plume Monitoring	660	Q	Q	YES	YES	Water quality sample collected in July 2008	
M-9	501652	TBPI	Plume Monitoring	440	Q	Q	YES	YES	Water quality sample collected in July 2008	55-87388
M-10	501653	TBPI	Plume Monitoring	1050	Q	Q	YES	YES	Water quality sample collected in July 2008	
M-20	906595	TBPI	Plume Monitoring	780	Q	Q ¹	YES	YES	Water quality sample collected in July 2008	
NP-2	605898	CWC	Plume Monitoring	515	Q	Q	YES	YES	Water quality sample collected in July 2008	
SCHNEIKER	611220	Schneiker	Plume Monitoring	495	Q	Q	NO	NO	Owner did not respond to access request	
TMM-1 ²	616156	Pima County	Plume Monitoring	500	Q	Q	YES	YES	Water quality sample collected in July 2008	None

¹ MH-11, MH-12 and M-20 added to sampling list after Work Plan approved

² Formally listed as Davis-Monthan (55-804995) and PC Parks (55-616156) wells; determined to be the same well located at the Titan Missile Museum (TMM)

ADWR = Arizona Department of Water Resources

Sierrita = Freeport-McMoran Sierrita Inc.

Q = Quarterly

TBPI = Twin Buttes Properties, Inc.

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

TABLE 2
Analytical Results for Third Quarter 2008 Groundwater Monitoring

Well Name	ADWR 55 Well Registry Number	Sample Date	pH (SU)	Specific Conductance (µS/cm)	Temperature (°C)	Sulfate, dissolved (mg/L)	Sulfate, total (mg/L)
WELLS FOR QUARTERLY [PLUME] MONITORING CONTROLLED BY SIERRITA							
ESP-1	623102	07/25/08	7.52	561	28.4	104	NA
ESP-2	623103	07/25/08	7.65	361	28.6	26.8	NA
ESP-3	623104	07/25/08	7.70	358	28.2	34	NA
ESP-4	623105	07/25/08	7.52	1096	28.6	420	NA
IW-1	623129	07/23/08	6.57	1228	29.5	670	NA
IW-2A	216464	07/23/08	6.88	474	30.3	60	NA
IW-3A	623131	07/23/08	6.62	1789	29.3	1460	NA
IW-4	623132	07/23/08	6.70	1899	31	1640	NA
IW-5	623133	07/23/08	6.76	1370	30.1	1730	NA
IW-6A	545565	07/17/08	6.84	1510	27.1	1850	NA
IW-8	508236	07/23/08	6.78	1440	27.5	1870	NA
IW-9	508238	07/23/08	6.88	1420	28.8	1730	NA
IW-10	508237	07/23/08	6.90	1460	28.4	1740	NA
IW-11	508235	07/29/08	6.58	1830	24.4	1720	NA
IW-12	545555	07/17/08	6.76	1917	28.4	1630	NA
IW-13	545556	07/17/08	6.60	1898	30	1850	NA
IW-14	545557	07/16/08	6.59	1901	29.9	1870	NA
IW-15	545558	07/15/08	6.75	1790	31.3	1730	NA
IW-16	545559	07/15/08	6.52	1778	31.2	1840	NA
IW-17	545560	07/15/08	6.63	1853	31.7	1770	NA
IW-18	545561	07/15/08	6.71	1847	30.2	1710	NA
IW-19	545562	07/15/08	6.78	1807	29.4	1670	NA
IW-20	545563	07/15/08	6.60	1650	29.4	1640	NA
IW-21	545564	07/29/08	6.49	1780	29	1670	NA
IW-22	200554	07/23/08	6.86	1370	28.9	1760	NA
IW-23	200555	07/23/08	6.84	1420	27.5	1730	NA
IW-24	200556	07/23/08	6.68	1420	30.7	1730	NA
MH-10	803636	07/31/08	7.07	1827	32.5	1550	NA
MH-11	803637	07/29/08	6.97	1767	32.2	1550	NA
MH-12	803638	07/30/08	7.10	1557	32.8	1170	NA
MH-13A	904071	07/16/08	7.03	1824	27.4	1720	NA
MH-13A DUP	904071	07/16/08	7.03	1824	27.4	1710	NA
MH-13B	904072	07/16/08	7.42	1589	31.5	1110	NA
MH-13C	904073	07/16/08	8.69	371	32.01	70	NA
MH-25A	201528	07/02/08	7.66	342	27.6	<10	NA
MH-25B	208429	07/02/08	7.04	1851	28.6	1650	NA
MH-25C	208426	07/02/08	7.13	1736	28.4	1330	NA
MH-26A	201527	07/02/08	7.57	337	27.8	20	NA
MH-26B	208427	07/02/08	6.98	1835	29.1	1660	NA
MH-26C	208428	07/02/08	7.90	1251	30.8	720	NA
MH-26C DUP	208428	07/02/08	7.90	1251	30.8	720	NA
MH-28	903548	07/01/08	6.95	3322	26.62	1680	NA
MH-29	903649	07/01/08	6.99	3361	25.95	1730	NA
MH-30	903884	07/01/08	7.02	3740	30.73	1660	NA

TABLE 2
Analytical Results for Third Quarter 2008 Groundwater Monitoring

Well Name	ADWR 55 Well Registry Number	Sample Date	pH (SU)	Specific Conductance (µS/cm)	Temperature (°C)	Sulfate, dissolved (mg/L)	Sulfate, total (mg/L)
MO-2007-1A	907342	07/14/08	7.41	359	27.9	16.6	NA
MO-2007-1B	907210	07/14/08	7.68	402	26.6	39.8	NA
MO-2007-1C	907209	07/14/08	7.64	608	31.4	165	NA
MO-2007-2	906765	07/14/08	7.11	987	31.3	472	NA
MO-2007-2 DUP	906765	07/14/08	7.11	987	31.3	446	NA
MO-2007-3B	906816	07/14/08	7.70	338	30.2	37.8	NA
MO-2007-3C	906817	07/17/08	7.98	493	32.7	126	NA
MO-2007-4A	907213	07/18/08	7.44	416	27.4	35.3	NA
MO-2007-4B	907212	07/18/08	7.57	391	29.2	34.8	NA
MO-2007-4B DUP	907212	07/18/08	7.57	391	29.2	35.1	NA
MO-2007-4C	907211	07/18/08	8.27	467	31.9	78.6	NA
MO-2007-5B	907456	07/24/08	7.86	1040	31.1	343	NA
MO-2007-5C	907457	07/24/08	8.30	746	31.3	233	NA
MO-2007-6A	907607	07/24/08	7.47	390	28.3	16.9	NA
MO-2007-6B	907606	07/24/08	8.00	473	33.8	81.5	NA
PZ-7	561870	07/11/08	7.29	1173	24.5	400	NA
PZ-7 DUP	561870	07/11/08	7.29	1173	24.5	400	NA
PZ-8	561866	07/01/08	7.15	1203	26.49	400	NA
WELLS FOR QUARTERLY [PLUME] MONITORING NOT CONTROLLED BY SIERRITA							
CC of GV	501760	07/07/08	6.97	736	23.7	119	116
CW-3	627483	07/11/08	7.53	484	25.7	56.7	56.7
CW-6	627485	07/08/08	7.43	416	27.2	47.9	47.7
CW-7	502546	07/08/08	7.11	2037	27.9	890	800
CW-7 DUP	502546	07/08/08	7.11	2037	27.9	910	920
CW-8	543600	07/08/08	7.40	1373	29.8	504	463
CW-9	588121	07/08/08	7.26	396	27.9	44.1	44
CW-10	207982	07/08/08	7.34	385	31.2	50.5	50
GV-01-GVDWID	603428	07/07/08	7.14	466	26.1	45.2	45
GV-02-GVDWID	603429	07/07/08	7.12	642	23.8	93.2	92.9
GV-SI-GVDWID	208825	07/07/08	7.18	382	27.2	<0.5	6.2
HAVEN GOLF	515867	07/07/08	6.93	727	23.9	112	91
I-10	608525	07/21/08	7.19	1036	30.9	480	NA
M-8	087390	07/25/08	7.62	398	27	24.5	NA
M-9	501652	07/21/08	7.52	485	29.5	68.7	NA
M-10	501653	07/21/08	7.69	489	31	89.8	NA
M-20	906595	07/25/08	6.99	1857	27.6	1550	NA
NP-2	605898	07/11/08	7.62	455	25.9	40.5	40.8
TMM-1	616156	07/09/08	7.94	296	27.3	7.3	7

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

TABLE 3
Groundwater Elevation Data for Water Levels Collected in Third Quarter 2008

Well Name	ADWR 55 Well Registry Number	Survey Source	UTM North	UTM East	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
WELLS FOR QUARTERLY [PLUME] MONITORING CONTROLLED BY SIERRITA								
ESP-2	623103	Sierrita	3526924.656	500241.637	2934.60	07/25/08	342.30	2592.30
ESP-4	623105	Sierrita	3526132.758	499916.830	2958.60	07/25/08	352.13	2606.47
ESP-5	623106	Sierrita	3527082.232	502007.895	2820.00	08/07/08	225.88	2594.12
IW-1	623129	Sierrita	3521277.779	496905.892	3144.69	07/29/08 ¹	405.85	2738.84
IW-3A	623131	Sierrita	3521722.640	497366.220	3121.45	07/29/08 ¹	420.90	2700.55
IW-4	623132	Sierrita	3522465.879	497371.700	3137.06	07/29/08 ¹	409.22	2727.84
IW-6A	545565	Sierrita	3523708.756	497381.226	3132.26	07/29/08 ¹	416.82	2715.44
IW-8	508236	Sierrita	3522020.520	497368.253	3122.19	07/29/08 ¹	437.00	2685.19
IW-9	508238	Sierrita	3522207.639	497369.791	3102.94	07/29/08 ¹	473.00	2629.94
IW-10	508237	Sierrita	3523122.199	497370.367	3129.64	07/29/08 ¹	466.11	2663.53
IW-11	508235	Sierrita	3523428.954	497371.414	3127.20	07/29/08 ¹	430.90	2696.30
IW-12	803638	Sierrita	3523969.869	497364.911	3138.18	07/29/08 ¹	425.90	2712.28
IW-13	545556	Sierrita	3524166.673	497363.820	3143.35	07/29/08 ¹	410.00	2733.35
IW-14	545557	Sierrita	3524373.122	497367.126	3146.42	07/29/08 ¹	478.06	2668.36
IW-15	545558	Sierrita	3524567.261	497372.873	3152.02	07/29/08 ¹	429.50	2722.52
IW-16	545559	Sierrita	3524782.868	497370.651	3162.85	07/29/08 ¹	409.02	2753.83
IW-17	545560	Sierrita	3525002.869	497373.717	3160.76	07/29/08 ¹	428.40	2732.36
IW-18	545561	Sierrita	3525169.771	497374.056	3171.15	07/29/08 ¹	447.00	2724.15
IW-19	545562	Sierrita	3525343.392	497373.630	3155.39	07/29/08 ¹	451.88	2703.51
IW-20	545563	Sierrita	3525568.770	497364.739	3164.21	07/29/08 ¹	422.99	2741.22
IW-21	545564	Sierrita	3525773.266	497374.585	3171.37	07/29/08 ¹	454.00	2717.37
IW-22	200554	Sierrita	3523273.592	497369.590	3128.25	07/29/08 ¹	442.08	2686.17
IW-24	200556	Sierrita	3522633.594	497371.670	3113.29	07/29/08 ¹	452.50	2660.79
MH-1	803629	Sierrita	3525872.911	497372.392	3179.27	08/07/08	439.65	2739.62
MH-3	803630	Sierrita	3525270.181	497472.430	3155.87	07/29/08	424.15	2731.72
MH-5	803632	Sierrita	3523725.339	497477.352	3123.47	08/07/08	391.55	2731.92
MH-6	803633	Sierrita	3522770.451	497436.646	3133.97	08/07/08	379.50	2754.47
MH-7	803634	Sierrita	3522016.471	497502.475	3111.23	08/08/08	372.22	2739.01
MH-9	803635	Sierrita	3521252.607	496438.181	3162.57	08/08/08	370.38	2792.19

TABLE 3
Groundwater Elevation Data for Water Levels Collected in Third Quarter 2008

Well Name	ADWR 55 Well Registry Number	Survey Source	UTM North	UTM East	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
MH-10	803636	Sierrita	3521236.861	495717.770	3187.84	07/31/08	358.50	2829.34
MH-11	803637	Sierrita	3524463.648	498749.381	3041.76	07/29/08	375.10	2666.66
MH-12	803638	Sierrita	3525207.002	498772.161	3055.08	07/30/08	424.39	2630.69
MH-13A	904071	Sierrita	3523793.443	498823.857	3026.23	07/16/08	333.78	2692.45
MH-13B	904072	Sierrita	3523787.358	498829.881	3025.63	07/16/08	337.92	2687.71
MH-13C	904073	Sierrita	3523793.032	498797.461	3028.46	07/16/08	343.35	2685.11
MH-14	528098	Sierrita	3525269.340	497517.626	3150.77	07/22/08	423.92	2726.85
MH-15E	528094	Sierrita	3523274.327	497584.800	3111.37	07/29/08	387.39	2723.98
MH-15W	528093	Sierrita	3523275.003	497524.067	3117.07	07/01/08	392.70	2724.37
MH-16E	528100	Sierrita	3521870.233	497576.673	3097.72	07/29/08	356.78	2740.94
MH-16W	528099	Sierrita	3521870.818	497516.074	3100.24	07/22/08	359.24	2741.00
MH-24	563799	Sierrita	3523709.046	497390.515	3131.16	08/07/08	396.78	2734.38
MH-25A	201528	Sierrita	3526510.175	498880.349	3056.57	07/02/08	455.68	2600.89
MH-25B	208429	Sierrita	3526515.244	498870.343	3058.22	07/02/08	457.10	2601.12
MH-25C	208426	Sierrita	3526491.132	498874.666	3057.24	07/02/08	456.23	2601.01
MH-26A	201527	Sierrita	3527818.233	498852.692	3070.89	07/02/08	496.98	2573.91
MH-26B	208427	Sierrita	3527814.016	498839.900	3069.11	07/02/08	494.10	2575.01
MH-26C	208428	Sierrita	3527806.770	498865.240	3070.50	07/02/08	495.55	2574.95
MH-28	903548	Sierrita	3524609.980	497471.427	3142.18	07/01/08	401.48	2740.70
MH-29	903649	Sierrita	3522805.518	497604.326	3123.15	07/01/08	380.50	2742.65
MH-30	903884	Sierrita	3525926.812	496682.307	3232.45	07/01/08	417.71	2814.74
MO-2007-1A	907342	Sierrita	3529331.380	500016.947	2967.65	07/14/08	428.42	2539.23
MO-2007-1B	907210	Sierrita	3529325.119	500021.574	2966.82	07/14/08	428.98	2537.84
MO-2007-1C	907209	Sierrita	3529328.959	500013.405	2968.58	07/14/08	426.73	2541.85
MO-2007-2	906765	Sierrita	3527621.102	497912.410	3153.83	07/14/08	577.35	2576.48
MO-2007-3B	906816	Sierrita	3528508.801	500522.491	2912.15	07/14/08	358.71	2553.44
MO-2007-3C	906817	Sierrita	3528508.743	500529.713	2911.90	07/14/08	359.84	2552.06
MO-2007-4A	907213	Sierrita	3525634.956	500383.682	2923.63	07/17/08	308.05	2615.58
MO-2007-4B	907212	Sierrita	3525613.952	500380.947	2923.57	07/18/08	308.95	2614.62
MO-2007-4C	907211	Sierrita	3525624.484	500382.217	2923.66	07/18/08	309.10	2614.56

TABLE 3
Groundwater Elevation Data for Water Levels Collected in Third Quarter 2008

Well Name	ADWR 55 Well Registry Number	Survey Source	UTM North	UTM East	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	07/24/08	268.61	2675.74
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	07/24/08	282.42	2662.49
MO-2007-6A	907607	Sierrita	3521842.050	498367.161	3043.37	07/24/08	305.81	2737.56
MO-2007-6B	907606	Sierrita	3521849.495	498367.887	3043.05	07/24/08	317.04	2726.01
PZ-7	561870	Sierrita	3526357.485	492533.171	3549.17	07/11/08	139.71	3409.46
PZ-8	561866	Sierrita	3524196.243	492972.681	3480.36	07/01/08	221.70	3258.66
PZ-9	561859	Sierrita	3525568.717	493180.504	3508.07	08/08/08	Dry	<3280
WELLS FOR QUARTERLY [PLUME] MONITORING NOT CONTROLLED BY SIERRITA								
1350	ND	TBPI	3528452.906	499357.609	3033.25	08/07/08	477.88	2555.37
CCOFGV	501760	HGC	3527876.220	501635.382	2823.45	07/07/08	261.09	2562.36
CW-3	627483	HGC	3523809.985	500047.663	2941.71	07/11/08	270.95	2670.76
CW-6	627485	CWC	3525794.239	500891.072	2867.00	07/08/08	253.80	2613.20
CW-7	502546	CWC	3528094.155	499659.842	2987.50	07/08/08	428.40	2559.10
CW-8	543600	CWC	3525661.191	499798.520	2957.50	07/08/08	341.75	2615.75
CW-9	588121	CWC	3528740.784	501072.040	2834.30	07/08/08	315.60	2518.70
CW-10	207982	CWC	3523455.502	500913.364	2868.50	07/08/08	203.25	2665.25
GV-01-GVDWID	603428	HGC	3522254.157	499812.869	2942.35	07/07/08	231.00	2711.35
GV-02-GVDWID	603429	HGC	3521654.457	499786.207	2930.47	07/07/08	201.05	2729.42
GV-SI-GVDWID	208825	HGC	3519509.930	497227.175	3042.65	08/14/08	245.50	2797.15
I-10	608525	Sierrita	3528469.536	497797.957	3210.58	07/21/08	657.10	2553.48
M-8	87390	Sierrita	3529692.237	499658.916	2999.53	07/25/08	466.18	2533.35
M-9	501652	Sierrita	3530303.954	499984.173	2973.81	07/21/08	454.27	2519.54
M-10	501653	Sierrita	3530143.114	499659.027	3005.68	07/21/08	480.15	2525.53
M-20	906595	TBPI	3528491.771	499082.070	3054.00	07/25/08	493.70	2560.30
NP-2	605898	HGC	3528517.116	500582.904	2906.56	07/11/08	355.10	2551.46
TMM-1	616156	HGC	3529736.231	500018.323	2967.08	07/09/08	437.37	2529.71

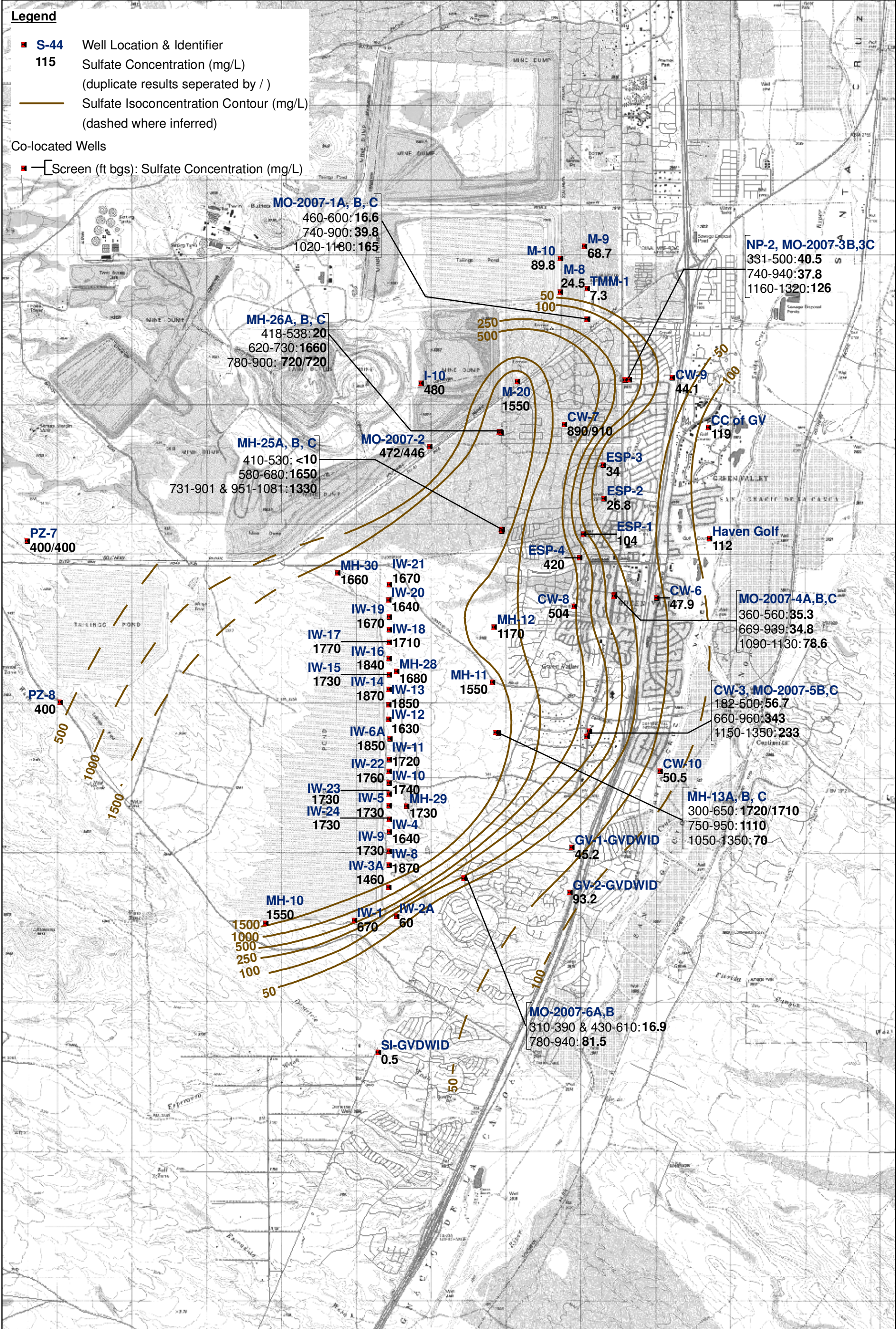
UTM = Universal Transverse Mercator, Zone 12 Band S

ft amsl = feet above mean sea level

¹Water level measurement was collected under dynamic conditions and not used for contouring

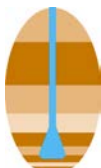
HGC = Hydro Geo Chem, Inc.

FIGURES



0 2,000 4,000 6,000 Feet

PROJECTION:
UTM Zone 12N NAD83



**HYDRO
GEO
CHEM, INC.**

**SULFATE CONCENTRATIONS IN
GROUNDWATER SAMPLES COLLECTED IN
JULY 2008**

Approved
DRS

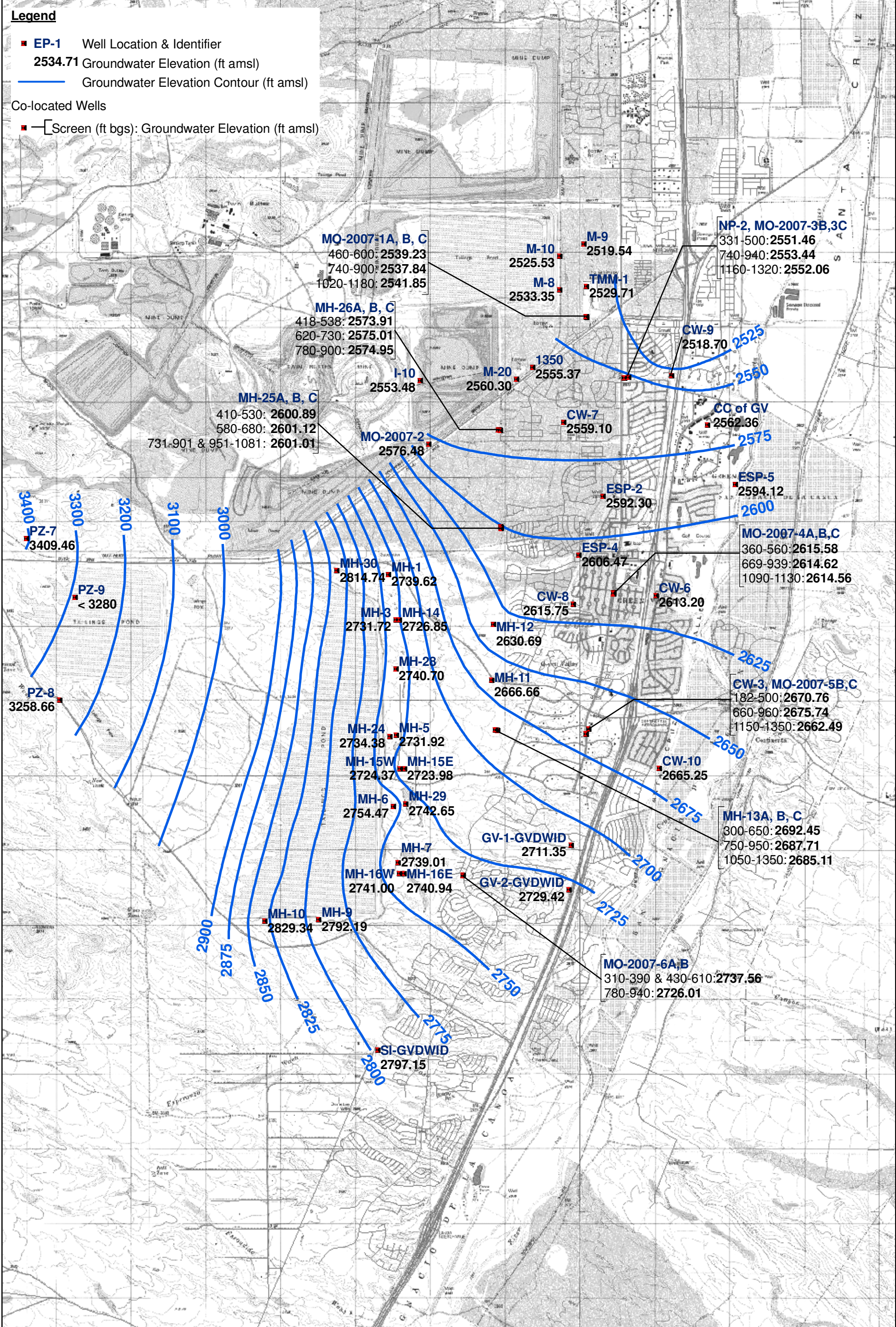
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APPENDIX A

**THIRD QUARTER 2008
DATA VERIFICATION REPORT FOR GROUNDWATER SAMPLES
COLLECTED BY FREEPORT-MCMORAN SIERRITA INC.
AND HYDRO GEO CHEM, INC.**

APPENDIX A

**THIRD QUARTER 2008
DATA VERIFICATION REPORT FOR GROUNDWATER SAMPLES
COLLECTED BY FREEPORT-MCMORAN SIERRITA INC.
AND HYDRO GEO CHEM, INC.**

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

September 26, 2008

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TABLE

A.1 ACZ Project ID and Associated Wells

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the third quarter 2008 (Q3-2008) by Freeport-McMoRan Sierrita Inc. (Sierrita), and Hydro Geo Chem, Inc. (HGC) pursuant to Mitigation Order on Consent Docket No. P-50-06 (MO). Sierrita conducted groundwater sampling and analysis at wells under its control with the exception of Twin Buttes Properties, Inc. (TBPI) wells I-10, M-8, M-9, M-10 and M-20 where Sierrita collected samples with TBPI. HGC collected groundwater samples from wells outside the control of Sierrita. All analytical results for groundwater samples collected for this project during the third quarter of 2008 were provided to HGC by ACZ Laboratories, Inc. (ACZ) for preparation of the Q3-2008 Groundwater Monitoring Report.

Quality assurance (QA) and quality control (QC) procedures are specified in the *Quality Assurance Project Plan for Aquifer Characterization Plan* (QAPP) (Appendix E of HGC, 2006) for field sampling, chain-of-custody (COC) documentation, laboratory analysis, and reporting. This report does not review field sampling or sample handling for samples collected by Sierrita since this information is evaluated following the provisions of the *Quality Assurance/Quality Control Plan for Water Monitoring, Phelps Dodge Sierrita, Inc.* (PDSI, 2005). This report does review field sampling for samples collected by HGC. Additionally, sample handling and laboratory QA/QC data are evaluated according to the data quality indicators (DQIs) given in the QAPP.

Appendix C of the main text of this report contains laboratory reports for Q3-2008

samples collected by Sierrita and HGC including COC forms, laboratory correspondence, QC summaries, data qualifiers, and any case narratives. The Q3-2008 analytical results for all 85 samples collected by Sierrita and HGC and are contained in 14 reports having the ACZ Project numbers identified in Table A.1.

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 HGC of any modifications that should be made regarding the usability and data validation status of the laboratory test results.

2. HGC FIELD OPERATIONS

Field operations for this project consisted of the following for all monitoring wells sampled by HGC:

- Static water level measurement,
- Well purging,
- Collection of water quality field parameters (pH, specific conductance [SC] in microsiemens per centimeter [$\mu\text{S}/\text{cm}$], and temperature in degrees Celsius [$^{\circ}\text{C}$]),
- Collection of groundwater samples for water quality analysis,
- Collection of groundwater quality assurance and quality control samples, and
- Equipment decontamination.

All documentation of field activities was evaluated for quality assurance and has been deemed to have met the documentation requirements stated in the QAPP.

2.1 Water Level Monitoring

Static water level measurements were collected by HGC at 11 wells during the third quarter of 2008. To accommodate Green Valley Water Improvement District's (GVDWID) pumping schedule it is not always possible to collect static water levels because certain wells cannot be shutdown. A water level measurement from well GV-SI-GVDWID was collected on August 14, 2008 by GVDWID personnel and provided to HGC. In all cases, the wells were allowed to come to static conditions before collecting the water level measurement. Before measuring the static water level at each well, the battery on the water level indicator was checked

and the sensitivity level was adjusted, if necessary. Each measurement was collected and verified by measuring the depth to water multiple times in order to obtain a consistent reading and accurate measurement.

2.2 Groundwater Sampling

During this monitoring period groundwater samples were collected from wells designated for sampling in the quarterly monitoring schedule of the Work Plan. More detailed information regarding the wells sampled for water quality and water level measurements is listed in Table 1 of the main text.

2.2.1 Pre-Sampling Field Activities

On each day of sampling, the pH¹ and SC² probes were calibrated. In addition, the water level indicator was checked for a signal, which indicates a working meter and battery strength. On each day where sampling extended for more than half a day, a mid-day calibration check was performed on the pH and SC probes to ensure their accurate measurement.

In addition to calibrating the instruments each day, measures were taken to 1) properly decontaminate field equipment, 2) ensure the appropriate storage and transport temperature of the samples, and 3) document activities related to the collection of groundwater samples as part of this project. These objectives were met by 1) replenishing or obtaining supplies of de-ionized

¹ Field pH meter was calibrated using a two point calibration and pH buffers 4 and 7
Q3 08 Sierrita Appendix A DV Report.doc
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September 26, 2008

water and ice daily, 2) use of the proper preservative and sample collection containers, 3) properly packing the samples on ice during field activities, 4) using de-ionized water to properly decontaminate field equipment prior to the start of sampling each day and after sampling at each well, and 5) obtaining the appropriate field notebook in order to document field activities related to the groundwater monitoring program.

2.2.2 Well Purging, Field Measurements, and Sample Collection

Ideally, three wetted casing volumes were purged from each well prior to sampling. However, when three casing volumes could not be purged, this information was noted on the groundwater sampling form (Appendix C) at each well for which this was the case. In cases where purging was necessary prior to sample collection the purge water was discharged to the ground surface.

Field measurements were collected at varying intervals during well purging at each well where a water quality sample was collected. Field parameters were monitored until a consistent measurement was obtained.

During this monitoring period, filtered and unfiltered groundwater samples were collected for analysis from 13 plume monitoring wells not under the control of Sierrita. Filtered and unfiltered groundwater samples were collected concurrently by using a single container to collect an initial sample for separation into bottles for filtered and unfiltered analyses. After collecting the initial sample, the unfiltered sample was collected by pouring a 500-milliliter

aliquot of the initial sample into a non-preserved bottle for sulfate analysis. Then each filtered sample was collected by filtering the remaining portion of the initial sample using a clean filtration apparatus and one unused, disposable 0.45-micron filter. All bottles were provided by ACZ. Bottles were checked for the correct preservative and maintained in a clean and secure work area, until used in the field.

2.2.3 Post-Sampling Field Activities

Post sampling field activities consisted of equipment decontamination, sample storage, and sample shipping. Field equipment that comes into contact with the sample was decontaminated using a small amount of Alconox[®] detergent and deionized water. After washing, the equipment was rinsed thoroughly with de-ionized water.

After sample collection, samples from each well were placed into a plastic bag and stored on ice until they could be packed securely for shipping to ACZ. In addition, each set of samples collected from each well was individually bagged (without ice) to prevent the label from getting soaked with water and rubbing off or becoming illegible.

3. SAMPLE HANDLING

All samples collected by Sierrita and HGC were shipped to ACZ for analysis. COC documentation accompanied all samples submitted and included the sample name, collection date and time. COCs contained in laboratory reports included the date and time the samples were received by ACZ. As noted on the analytical data reports from ACZ, all of the sample bottles were received intact, properly preserved, and in good condition.

The temperatures of the following six shipping containers (identified by their laboratory login numbers) exceeded 4 °C upon receipt at the laboratory.

ACZ Project ID	Sample Collection Date	Sample Relinquished Date	Sample Received Date by ACZ	Temperature Upon Receipt (°C)
L70303	07/02/08	07/02/08	07/03/08	4.8
L70487	07/11/08	07/14/08	07/15/08	5.9
L70527	07/15/08	07/16/08	07/17/08	4.7
L70581	07/16/08	07/17/08	07/18/08	4.7
L70780	07/25/08	07/28/08	07/29/08	5.5
L70781	07/18/08	07/24/08	07/29/08	5.5

As noted in the above table, the samples were shipped within six days of sample collection, and the time between sample collection and receipt of samples by ACZ ranged from one to five days. This temperature exceedance is not considered to have a significant impact on the analytical results pertaining to the sulfate analysis for these samples.

4. 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.

4.1 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.

4.2 Analytical Methods

The following list identifies the methods used for sulfate analysis during this monitoring period:

- SM4500 SO4-D (Gravimetric)
- U.S. Environmental Protection Agency (EPA) 300.0 (Ion-Chromatography)

4.3 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
SM4500 SO4-D	10	50	10

mg/L = milligrams per liter

¹ Target MDL from Table E.2 of QAPP

4.4 Timeliness

Holding time was derived from the EPA methods utilized and were calculated beginning from the time of sample collection. The majority of samples submitted to the laboratory were analyzed within their recommended method specific holding time for sulfate analysis except in the following: Samples collected on July 14, 2008 (MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-2, MO-2007-3B, and DUP071408A) were qualified with an “HC” flag, indicating initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.

4.5 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
- Field blank samples

4.5.1 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). All preparation blanks were prepared from analyte-free water and treated as routine samples. Analytical results of all 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 Method 300.0 also were reviewed. The results of each initial calibration blank analyzed showed no detections of the target analyte. All analytical results for the initial calibration verification standards and laboratory fortified blanks that were analyzed showed percent recoveries that were within the acceptance criteria specified by the ACZ QA plan and the QAPP.

4.5.2 Analytical Spikes and Analytical Spike Duplicates

Analytical spike and spike duplicate samples were analyzed for all sulfate samples that were analyzed using EPA Method 300.0. Spike recoveries for most analyses were between 90 and 110 percent. Instances in which analytical spike recoveries were low were qualified with an “M2” flag however, in each case the method control sample recoveries were acceptable.

4.5.3 Laboratory Control Samples

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

4.5.4 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were also reviewed as part of this quality data verification report. Field duplicate samples are discussed in Section 5.1. 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 all 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.

4.5.5 Field Blank Samples

During the third quarter of 2008, a total of four field blank samples were collected. Three of these were field and equipment blank samples containing filtered deionized water (TB073108A, EQB073108A, and EQB070808), and one field blank sample collected using unfiltered deionized water (FB070808). All of these samples were collected in the field and were submitted along with other samples to evaluate the potential for contaminant introduction under field conditions. As required by Section 4.2.1.5 of the QAPP, a minimum of one field blank sample was collected every time an equipment blank sample was collected at a rate of one in every twenty samples. Analytical results from field blank samples FB070808 and TB073108A showed no detections. However, sulfate was detected in equipment blank samples EQB070808 and EQB073108A at concentrations of 2.1 mg/L and 20 mg/L, respectively. These low levels of sulfate are not considered significant given the concentration of sulfate in the samples.

5. 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 Q3-2008 groundwater sampling and analysis conducted by Sierrita.

5.1 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 4.5.2 and 4.5.4, there were no exceedances of RPD QA criteria for any laboratory duplicates. During this monitoring period, a total of six field duplicate samples were collected. Five of these (DUP070208A, DUP071108A, DUP071408A, DUP071608B, and DUP071808A) were collected by Sierrita for filtered analysis, whereas DUP070808 was collected by HGC for filtered and unfiltered sulfate analysis. The collection of six duplicate samples exceeds the QA/QC goal of collecting one duplicate sample for every twenty groundwater samples collected, as stated in Section 4.2.1.5 of the QAPP.

Results for the six duplicate field samples collected are provided in the table below. The range of RPD values was between zero and 5.66 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 Field (mg/L)	Sulfate Duplicate (mg/L)	RPD (%)
CW-7	DUP070808	L70408	890	910	2.22
MH-26C	DUP070208A	L70303	720	720	0.00
PZ-7	DUP071108A	L70487	400	400	0.00
MO-2007-2	DUP071408A	L70781	472	446	5.66
MH-13A	DUP071608A	L70581	1720	1710	0.58
MO-2007-4B	DUP071808A	L70781	34.8	35.1	0.86

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

5.2 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.

5.3 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 4.5.1, 4.5.2, and 4.5.3 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.

5.4 Representativeness

All samples were taken from locations specified in the Work Plan (HGC, 2006) 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.

5.5 Comparability

All samples were collected using standardized procedures (HGC, 2006 and 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.

5.6 Completeness

All samples collected by Sierrita and HGC were subsequently analyzed and reported by ACZ. All samples collected and 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.

5.7 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.

6. 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.

TABLE

TABLE A.1
ACZ Project ID and Associated Wells

ACZ Project ID	Wells Reported
<i>Number of wells sampled by Sierrita¹: 62</i> <i>Number of duplicate samples collected: 5</i> <i>Number of blank samples collected: 2 (1 field blank and 1 equipment blank)</i>	
L70281	MH-30, PZ-8
L70285	MH-28, MH-29
L70303	MH-25A, MH-25B, MH-25C, MH-26A, MH-26B, MH-26C, DUP070208A
L70487	PZ-7, DUP071108A
L70527	IW-15, IW-16, IW-17, IW-18, IW-19, IW-20
L70581	IW-14, MH-13A, MH-13B, MH-13C, IW-6A, IW-12, IW-13, DUP071608A
L70726	IW-4, IW-5, IW-8, IW-9, IW-22, IW-23, IW-24
L70737	IW-1, IW-2A, IW-3A, IW-10
L70780	ESP-1, ESP-2, ESP-3, ESP-4, M-8, M-20
L70781	MO-2007-1A, MO-2007-1B, MO-2007-1C, MO-2007-2, 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, I-10, M-9, M-10, DUP071408A, DUP071808A
L70901	IW-11, IW-21, MH-11, MH-12, MH-10, EQB073108A, TB073108A
<i>Number of wells sampled by HGC²: 13</i> <i>Number of duplicate samples collected: 1</i> <i>Number of blank samples collected: 2 (1 unfiltered field blank and 1 filtered equipment blank)</i>	
L70337	SI-GVDWID, GV-1-GVDWID, GV-2-GVDWID, CC of GV, HAVEN GOLF
L70408	CW-6, CW-7, CW-8, CW-9, CW-10, TMM-1, DUP070808, EQB070808, FB070808
L70455	CW-3, NP-2

¹ Samples collected by Sierrita were filtered in the field using a disposable 0.45-micron filter.

² Samples collected by HGC were both filtered and unfiltered.

APPENDIX B

ANALYTICAL DATA REPORTS FROM ACZ LABORATORIES, INC.

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

July 30, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70281– SULFATE ONLY

Bill Dorris:

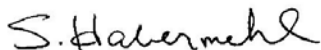
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 03, 2008. This project was assigned to ACZ's project number, L70281. Please reference this number in all future inquiries.

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 L70281. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-30

ACZ Sample ID: **L70281-01**

Date Sampled: 07/01/08 08:15

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1660			mg/L	50	250	07/08/08 10:08	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: PZ-8

ACZ Sample ID: **L70281-02**

Date Sampled: 07/01/08 11:58

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	400			mg/L	10	50	07/08/08 10:12	gkj

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800PBW2	PBW	07/09/08 18:32				U	mg/L		-20	20			
WG247800LCSW5	LCSW	07/09/08 18:44	WC080702-8	820		791.6	mg/L	96.5	90	110			
L70281-02DUP	DUP	07/09/08 21:51			178	177.7	mg/L				0.2	20	
WG247800PBW3	PBW	07/09/08 21:57				U	mg/L		-20	20			
WG247800LCSW8	LCSW	07/09/08 22:09	WC080702-8	820		786.9	mg/L	96	90	110			
WG247800PBW4	PBW	07/10/08 1:13				U	mg/L		-20	20			
WG247800LCSW11	LCSW	07/10/08 1:25	WC080702-8	820		795.9	mg/L	97.1	90	110			
WG247800LCSW14	LCSW	07/10/08 3:30	WC080702-8	820		794	mg/L	96.8	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.964	mg/L	98.2	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.09	0.09			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	1		1.036	mg/L	103.6	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	1	U	1.19	mg/L	119	85	115			M1
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	1	U	1.202	mg/L	120.2	85	115	1	20	M1

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.02006		.02098	mg/L	104.6	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0012	0.0012			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.01		.00993	mg/L	99.3	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.01	U	.01017	mg/L	101.7	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.01	U	.01002	mg/L	100.2	70	130	1.49	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248912													
WG248912ICV	ICV	07/28/08 16:32	MS080722-4	.05		.05382	mg/L	107.6	90	110			
WG248912ICB	ICB	07/28/08 16:38				U	mg/L		-0.0015	0.0015			
WG248912LFB	LFB	07/28/08 16:49	MS080714-1	.05		.05417	mg/L	108.3	85	115			
L70281-02AS	AS	07/28/08 17:06	MS080714-1	.05	.001	.05756	mg/L	113.1	70	130			
L70281-02ASD	ASD	07/28/08 17:12	MS080714-1	.05	.001	.05701	mg/L	112	70	130	0.96	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.977	mg/L	98.9	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.009	0.009			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	.5		.5226	mg/L	104.5	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	.5	.012	.5826	mg/L	114.1	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	.5	.012	.5903	mg/L	115.7	85	115	1.31	20	MA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: OJ06DZ

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248912													
WG248912ICV	ICV	07/28/08 16:32	MS080722-4	.05		.05059	mg/L	101.2	90	110			
WG248912ICB	ICB	07/28/08 16:38				.00016	mg/L		-0.0003	0.0003			
WG248912LFB	LFB	07/28/08 16:49	MS080714-1	.05005		.04857	mg/L	97	85	115			
L70281-02AS	AS	07/28/08 17:06	MS080714-1	.05005	U	.04732	mg/L	94.5	70	130			
L70281-02ASD	ASD	07/28/08 17:12	MS080714-1	.05005	U	.04648	mg/L	92.9	70	130	1.79	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.05135	mg/L	102.7	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0003	0.0003			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.05		.04942	mg/L	98.8	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.05	U	.04824	mg/L	96.5	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.05	U	.04821	mg/L	96.4	70	130	0.06	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	100		94.45	mg/L	94.5	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.6	0.6			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	67.97008		68.5	mg/L	100.8	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	67.97008	80.1	150.84	mg/L	104.1	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	67.97008	80.1	151.79	mg/L	105.5	85	115	0.63	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248008													
WG248008ICV	ICV	07/12/08 21:11	WI071212-1	54.945		55.7	mg/L	101.4	90	110			
WG248008ICB	ICB	07/12/08 21:11				U	mg/L		-3	3			
WG248009													
WG248009ICV	ICV	07/12/08 22:04	WI071212-1	54.945		55.2	mg/L	100.5	90	110			
WG248009ICB	ICB	07/12/08 22:05				U	mg/L		-3	3			
WG248009LFB1	LFB	07/12/08 22:06	WI080620-3	30		29.9	mg/L	99.7	90	110			
L70281-02DUP	DUP	07/12/08 22:23			56	56.1	mg/L				0.2	20	
WG248009LFB2	LFB	07/12/08 22:33	WI080620-3	30		29.7	mg/L	99	90	110			
L70281-01AS	AS	07/12/08 22:48	WI080620-3	150	133	281.4	mg/L	98.9	90	110			

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.909	mg/L	95.5	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	.5		.51	mg/L	102	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	.5	U	.563	mg/L	112.6	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	.5	U	.571	mg/L	114.2	85	115	1.41	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: OJ06DZ

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248276													
WG248276ICV	ICV	07/17/08 23:43	II080717-3	2		1.934	mg/L	96.7	95	105			
WG248276ICB	ICB	07/17/08 23:47				U	mg/L		-0.03	0.03			
WG248276LFB	LFB	07/17/08 23:59	II080708-3	.5		.537	mg/L	107.4	85	115			
L70263-01AS	AS	07/18/08 0:54	II080708-3	.5	U	.515	mg/L	103	85	115			
L70263-01ASD	ASD	07/18/08 0:57	II080708-3	.5	U	.508	mg/L	101.6	85	115	1.37	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800LCSW1	LCSW	07/09/08 15:37	PCN28873	1408.8		1445	µmhos/cm	102.6	90	110			
WG247800LCSW4	LCSW	07/09/08 18:33	PCN28873	1408.8		1451	µmhos/cm	103	90	110			
L70281-02DUP	DUP	07/09/08 21:51			1260	1263	µmhos/cm				0.2	20	
WG247800LCSW7	LCSW	07/09/08 21:58	PCN28873	1408.8		1440	µmhos/cm	102.2	90	110			
WG247800LCSW10	LCSW	07/10/08 1:15	PCN28873	1408.8		1442	µmhos/cm	102.4	90	110			
WG247800LCSW13	LCSW	07/10/08 3:19	PCN28873	1408.8		1433	µmhos/cm	101.7	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.908	mg/L	95.4	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	.5		.517	mg/L	103.4	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	.5	U	.564	mg/L	112.8	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	.5	U	.573	mg/L	114.6	85	115	1.58	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248043													
WG248043ICV	ICV	07/14/08 15:57	WI080711-5	.3		.2979	mg/L	99.3	90	110			
WG248043ICB	ICB	07/14/08 15:58				U	mg/L		-0.009	0.009			
WG248065													
WG248065ICV	ICV	07/14/08 16:48	WI080711-5	.3		.2989	mg/L	99.6	90	110			
WG248065ICB	ICB	07/14/08 16:49				U	mg/L		-0.015	0.015			
WG248024LRB	LRB	07/14/08 16:50				U	mg/L		-0.015	0.015			
WG248024LFB	LFB	07/14/08 16:51	WI080711-2	.2		.2097	mg/L	104.9	90	110			
L70263-05DUP	DUP	07/14/08 16:55			.438	.4334	mg/L				1.1	20	
L70281-01LFM	LFM	07/14/08 16:57	WI080711-2	.2	U	.2098	mg/L	104.9	90	110			

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248037													
WG248037ICV	ICV	07/14/08 13:48	WC080714-1	2		1.85	mg/L	92.5	90	110			
WG248037ICB	ICB	07/14/08 13:54				U	mg/L		-0.3	0.3			
WG248037LFB2	LFB	07/14/08 15:23	WC080515-3	5		4.88	mg/L	97.6	90	110			
L70172-02AS	AS	07/14/08 15:33	WC080515-3	5	.1	4.29	mg/L	83.8	90	110			M2
L70172-02DUP	DUP	07/14/08 15:36			.1	.14	mg/L				33.3	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: **OJ06DZ**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248276													
WG248276ICV	ICV	07/17/08 23:43	II080717-3	2		1.961	mg/L	98.1	95	105			
WG248276ICB	ICB	07/17/08 23:47				U	mg/L		-0.06	0.06			
WG248276LFB	LFB	07/17/08 23:59	II080708-3	1		1.11	mg/L	111	85	115			
L70263-01AS	AS	07/18/08 0:54	II080708-3	1	U	1.061	mg/L	106.1	85	115			
L70263-01ASD	ASD	07/18/08 0:57	II080708-3	1	U	1.048	mg/L	104.8	85	115	1.23	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248214													
WG248214ICV	ICV	07/16/08 21:31	MS080714-1	.05		.05064	mg/L	101.3	90	110			
WG248214ICB	ICB	07/16/08 21:37				.00013	mg/L		-0.0003	0.0003			
WG248214LFB	LFB	07/16/08 21:49	MS080714-1	.05		.05003	mg/L	100.1	85	115			
L70264-04AS	AS	07/16/08 23:39	MS080714-1	.05	.0003	.04895	mg/L	97.3	70	130			
L70264-04ASD	ASD	07/16/08 23:45	MS080714-1	.05	.0003	.04907	mg/L	97.5	70	130	0.24	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	100		96.43	mg/L	96.4	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.6	0.6			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	49.96908		51.06	mg/L	102.2	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	49.96908	10.6	66.92	mg/L	112.7	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	49.96908	10.6	67.48	mg/L	113.8	85	115	0.83	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.9077	mg/L	95.4	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.015	0.015			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	.5		.5466	mg/L	109.3	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	.5	.668	1.2167	mg/L	109.7	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	.5	.668	1.2288	mg/L	112.2	85	115	0.99	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247567													
WG247567ICV	ICV	07/08/08 15:06	II080624-3	.00501		.00487	mg/L	97.2	95	105			
WG247567ICB	ICB	07/08/08 15:08				U	mg/L		-0.0002	0.0002			
WG247719													
WG247719LRB	LRB	07/08/08 18:34				U	mg/L		-0.00044	0.00044			
WG247719LFB	LFB	07/08/08 18:37	II080610-3	.002		.00184	mg/L	92	85	115			
L70263-01LFM	LFM	07/08/08 18:42	II080610-3	.002	U	.00185	mg/L	92.5	85	115			
L70263-01LFMD	LFMD	07/08/08 18:44	II080610-3	.002	U	.00187	mg/L	93.5	85	115	1.08	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: OJ06DZ

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.934	mg/L	96.7	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	.5		.501	mg/L	100.2	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	.5	U	.538	mg/L	107.6	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	.5	U	.539	mg/L	107.8	85	115	0.19	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248363													
WG248363ICV	ICV	07/19/08 16:02	II080717-3	2		1.916	mg/L	95.8	95	105			
WG248363ICB	ICB	07/19/08 16:05				U	mg/L		-0.03	0.03			
WG248363LFB	LFB	07/19/08 16:17	II080708-3	.5		.556	mg/L	111.2	85	115			
L70263-01AS	AS	07/19/08 17:16	II080708-3	1	.02	1.108	mg/L	108.8	85	115			
L70263-01ASD	ASD	07/19/08 17:19	II080708-3	1	.02	1.116	mg/L	109.6	85	115	0.72	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
WG247998													
WG247998ICV	ICV	07/12/08 15:11	WI080613-1	2.416		2.454	mg/L	101.6	90	110			
WG247998ICB	ICB	07/12/08 15:13				U	mg/L		-0.06	0.06			
WG247999													
WG247999ICV	ICV	07/12/08 16:40	WI080613-1	2.416		2.399	mg/L	99.3	90	110			
WG247999ICB	ICB	07/12/08 16:41				U	mg/L		-0.06	0.06			
WG247999LFB	LFB	07/12/08 16:44	WI080312-1	2		2.001	mg/L	100.1	90	110			
L70124-01AS	AS	07/12/08 16:46	WI080312-1	2	U	1.977	mg/L	98.9	90	110			
L70257-01DUP	DUP	07/12/08 16:49			1.04	1.043	mg/L				0.3	20	

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800LCSW3	LCSW	07/09/08 15:50	PCN29627	6		6.5	units	108.3	90	110			
WG247800LCSW6	LCSW	07/09/08 18:47	PCN29627	6		6.5	units	108.3	90	110			
L70281-02DUP	DUP	07/09/08 21:51			8.3	8.3	units				0	20	
WG247800LCSW9	LCSW	07/09/08 22:12	PCN29627	6		6.46	units	107.7	90	110			
WG247800LCSW12	LCSW	07/10/08 1:29	PCN29627	6		6.49	units	108.2	90	110			
WG247800LCSW15	LCSW	07/10/08 3:34	PCN29627	6		6.45	units	107.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	20		19.65	mg/L	98.3	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.9	0.9			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	99.76186		103.38	mg/L	103.6	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	99.76186	2.6	119.27	mg/L	116.9	85	115			M1
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	99.76186	2.6	120.45	mg/L	118.1	85	115	0.98	20	M1

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: OJ06DZ

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247679													
WG247679PBW	PBW	07/08/08 9:15				U	mg/L		-20	20			
WG247679LCSW	LCSW	07/08/08 9:17	PCN29985	260		274	mg/L	105.4	80	120			
L70296-01DUP	DUP	07/08/08 10:15			5150	5136	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
WG248214													
WG248214ICV	ICV	07/16/08 21:31	MS080714-1	.05		.05106	mg/L	102.1	90	110			
WG248214ICB	ICB	07/16/08 21:37				U	mg/L		-0.0003	0.0003			
WG248214LFB	LFB	07/16/08 21:49	MS080714-1	.05		.04404	mg/L	88.1	85	115			
L70264-04AS	AS	07/16/08 23:39	MS080714-1	.05	U	.04736	mg/L	94.7	70	130			
L70264-04ASD	ASD	07/16/08 23:45	MS080714-1	.05	U	.04797	mg/L	95.9	70	130	1.28	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	100		97.82	mg/L	97.8	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.9	0.9			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	98.21624		102.09	mg/L	103.9	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	98.21624	25.2	136.82	mg/L	113.6	85	115			
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	98.21624	25.2	138.05	mg/L	114.9	85	115	0.89	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247673													
WG247673PBW	PBW	07/08/08 9:50				U	mg/L		-30	30			
WG247673LCSW	LCSW	07/08/08 9:53	WC080514-1	100		96	mg/L	96	80	120			
L70295-02DUP	DUP	07/08/08 10:34			1350	1321	mg/L				2.2	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248214													
WG248214ICV	ICV	07/16/08 21:31	MS080714-1	.05		.05343	mg/L	106.9	90	110			
WG248214ICB	ICB	07/16/08 21:37				U	mg/L		-0.0003	0.0003			
WG248214LFB	LFB	07/16/08 21:49	MS080714-1	.0501		.04993	mg/L	99.7	85	115			
L70264-04AS	AS	07/16/08 23:39	MS080714-1	.0501	U	.05031	mg/L	100.4	70	130			
L70264-04ASD	ASD	07/16/08 23:45	MS080714-1	.0501	U	.05029	mg/L	100.4	70	130	0.04	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248214													
WG248214ICV	ICV	07/16/08 21:31	MS080714-1	.05		.05133	mg/L	102.7	90	110			
WG248214ICB	ICB	07/16/08 21:37				U	mg/L		-0.0003	0.0003			
WG248214LFB	LFB	07/16/08 21:49	MS080714-1	.05		.04934	mg/L	98.7	85	115			
L70264-04AS	AS	07/16/08 23:39	MS080714-1	.05	U	.05177	mg/L	103.5	70	130			
L70264-04ASD	ASD	07/16/08 23:45	MS080714-1	.05	U	.05154	mg/L	103.1	70	130	0.45	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

Project ID: OJ06DZ

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	II080115-3	2		1.894	mg/L	94.7	95	105			
WG248196ICB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	II080708-3	.5		.511	mg/L	102.2	85	115			
L70263-02AS	AS	07/16/08 16:08	II080708-3	.5	2.9	3.249	mg/L	69.8	85	115			M3
L70263-02ASD	ASD	07/16/08 16:11	II080708-3	.5	2.9	3.262	mg/L	72.4	85	115	0.4	20	M3

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70281-01	WG248196	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Barium, 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.
		Chromium, dissolved	M200.7 ICP	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [$<$ MDL].
	WG248363	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248196	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, 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.
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($<$ 10x MDL).
	L70281-02	WG248196	Aluminum, dissolved	M200.7 ICP	M1
Barium, 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.
Chromium, dissolved			M200.7 ICP	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [$<$ MDL].
WG248363		Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
WG248196		Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, 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.
WG248037		Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($<$ 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70281**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70281
 Date Received: 7/3/2008
 Received By:
 Date Printed: 7/3/2008

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)
1903	2.8	14

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

Notes

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70281
 Date Received: 7/3/2008
 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
L70281-01	MH-30		Y		Y							<input type="checkbox"/>
L70281-02	PZ-8		Y		Y							<input type="checkbox"/>

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: _____

Page 16 of 16

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

August 04, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70285- SULFATE ONLY

Bill Dorris:

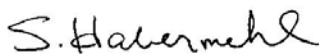
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 03, 2008. This project was assigned to ACZ's project number, L70285. Please reference this number in all future inquiries.

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 L70285. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-28

ACZ Sample ID: **L70285-01**

Date Sampled: 07/01/08 08:50

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1680			mg/L	50	250	07/08/08 10:19	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-29

ACZ Sample ID: **L70285-02**

Date Sampled: 07/01/08 10:50

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730	H	*	mg/L	20	100	07/31/08 10:15	jlf

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800PBW2	PBW	07/09/08 18:32				U	mg/L		-20	20			
WG247800LCSW5	LCSW	07/09/08 18:44	WC080702-8	820		791.6	mg/L	96.5	90	110			
WG247800PBW3	PBW	07/09/08 21:57				U	mg/L		-20	20			
WG247800LCSW8	LCSW	07/09/08 22:09	WC080702-8	820		786.9	mg/L	96	90	110			
L70295-01DUP	DUP	07/09/08 23:34			58	57.9	mg/L				0.2	20	
WG247800PBW4	PBW	07/10/08 1:13				U	mg/L		-20	20			
WG247800LCSW11	LCSW	07/10/08 1:25	WC080702-8	820		795.9	mg/L	97.1	90	110			
WG247800LCSW14	LCSW	07/10/08 3:30	WC080702-8	820		794	mg/L	96.8	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		1.968	mg/L	98.4	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.09	0.09			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	1		1.007	mg/L	100.7	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	1	U	1.011	mg/L	101.1	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	1	U	.982	mg/L	98.2	85	115	2.91	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.02006		.02098	mg/L	104.6	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0012	0.0012			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.01		.00993	mg/L	99.3	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.01	U	.01017	mg/L	101.7	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.01	U	.01002	mg/L	100.2	70	130	1.49	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.05174	mg/L	103.5	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0015	0.0015			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.05		.04907	mg/L	98.1	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.05	.0007	.05266	mg/L	103.9	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.05	.0007	.05268	mg/L	104	70	130	0.04	20	
WG248912													
WG248912ICV	ICV	07/28/08 16:32	MS080722-4	.05		.05382	mg/L	107.6	90	110			
WG248912ICB	ICB	07/28/08 16:38				U	mg/L		-0.0015	0.0015			
WG248912LFB	LFB	07/28/08 16:49	MS080714-1	.05		.05417	mg/L	108.3	85	115			
L70281-02AS	AS	07/28/08 17:06	MS080714-1	.05	.001	.05756	mg/L	113.1	70	130			
L70281-02ASD	ASD	07/28/08 17:12	MS080714-1	.05	.001	.05701	mg/L	112	70	130	0.96	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: **OJ06DZ**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		2.0283	mg/L	101.4	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.009	0.009			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	.5		.5128	mg/L	102.6	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	.5	.047	.5462	mg/L	99.8	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	.5	.047	.5375	mg/L	98.1	85	115	1.61	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248912													
WG248912ICV	ICV	07/28/08 16:32	MS080722-4	.05		.05059	mg/L	101.2	90	110			
WG248912ICB	ICB	07/28/08 16:38				.00016	mg/L		-0.0003	0.0003			
WG248912LFB	LFB	07/28/08 16:49	MS080714-1	.05005		.04857	mg/L	97	85	115			
L70281-02AS	AS	07/28/08 17:06	MS080714-1	.05005	U	.04732	mg/L	94.5	70	130			
L70281-02ASD	ASD	07/28/08 17:12	MS080714-1	.05005	U	.04648	mg/L	92.9	70	130	1.79	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.05135	mg/L	102.7	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0003	0.0003			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.05		.04942	mg/L	98.8	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.05	U	.04824	mg/L	96.5	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.05	U	.04821	mg/L	96.4	70	130	0.06	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	100		94.98	mg/L	95	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.6	0.6			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	67.97008		67.82	mg/L	99.8	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	67.97008	192	248.06	mg/L	82.5	85	115			M2
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	67.97008	192	244.51	mg/L	77.3	85	115	1.44	20	M2

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248008													
WG248008ICV	ICV	07/12/08 21:11	WI071212-1	54.945		55.7	mg/L	101.4	90	110			
WG248008ICB	ICB	07/12/08 21:11				U	mg/L		-3	3			
WG248009													
WG248009ICV	ICV	07/12/08 22:04	WI071212-1	54.945		55.2	mg/L	100.5	90	110			
WG248009ICB	ICB	07/12/08 22:05				U	mg/L		-3	3			
WG248009LFB1	LFB	07/12/08 22:06	WI080620-3	30		29.9	mg/L	99.7	90	110			
L70281-02DUP	DUP	07/12/08 22:23			56	56.1	mg/L				0.2	20	
WG248009LFB2	LFB	07/12/08 22:33	WI080620-3	30		29.7	mg/L	99	90	110			
L70281-01AS	AS	07/12/08 22:48	WI080620-3	150	133	281.4	mg/L	98.9	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: **OJ06DZ**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		1.906	mg/L	95.3	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	.5		.516	mg/L	103.2	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	.5	U	.504	mg/L	100.8	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	.5	U	.49	mg/L	98	85	115	2.82	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275ICV	ICV	07/18/08 1:47	II080717-3	2		1.915	mg/L	95.8	95	105			
WG248275ICB	ICB	07/18/08 1:51				U	mg/L		-0.03	0.03			
WG248275LFB	LFB	07/18/08 2:03	II080708-3	.5		.542	mg/L	108.4	85	115			
L70162-01AS	AS	07/18/08 2:10	II080708-3	.5	U	.553	mg/L	110.6	85	115			
L70162-01ASD	ASD	07/18/08 2:13	II080708-3	.5	U	.547	mg/L	109.4	85	115	1.09	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800LCSW1	LCSW	07/09/08 15:37	PCN28873	1408.8		1445	µmhos/cm	102.6	90	110			
WG247800LCSW4	LCSW	07/09/08 18:33	PCN28873	1408.8		1451	µmhos/cm	103	90	110			
WG247800LCSW7	LCSW	07/09/08 21:58	PCN28873	1408.8		1440	µmhos/cm	102.2	90	110			
L70295-01DUP	DUP	07/09/08 23:34			3090	3100	µmhos/cm				0.3	20	
WG247800LCSW10	LCSW	07/10/08 1:15	PCN28873	1408.8		1442	µmhos/cm	102.4	90	110			
WG247800LCSW13	LCSW	07/10/08 3:19	PCN28873	1408.8		1433	µmhos/cm	101.7	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		1.945	mg/L	97.3	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	.5		.512	mg/L	102.4	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	.5	U	.499	mg/L	99.8	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	.5	U	.492	mg/L	98.4	85	115	1.41	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248112													
WG248112ICV	ICV	07/15/08 11:43	WI080711-5	.3		.2787	mg/L	92.9	90	110			
WG248112ICB	ICB	07/15/08 11:43				U	mg/L		-0.015	0.015			
WG248038LRB	LRB	07/15/08 12:14				U	mg/L		-0.015	0.015			
WG248038LFB	LFB	07/15/08 12:14	WI080711-2	.2		.2024	mg/L	101.2	90	110			
L70263-02LFM	LFM	07/15/08 12:14	WI080711-2	.2	U	.208	mg/L	104	90	110			
L70263-01DUP	DUP	07/15/08 12:47			.005	U	mg/L				0	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: **OJ06DZ**

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248037													
WG248037ICV	ICV	07/14/08 13:48	WC080714-1	2		1.85	mg/L	92.5	90	110			
WG248037ICB	ICB	07/14/08 13:54				U	mg/L		-0.3	0.3			
WG248037LFB2	LFB	07/14/08 15:23	WC080515-3	5		4.88	mg/L	97.6	90	110			
L70172-02AS	AS	07/14/08 15:33	WC080515-3	5	.1	4.29	mg/L	83.8	90	110			M2
L70172-02DUP	DUP	07/14/08 15:36			.1	.14	mg/L				33.3	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		1.915	mg/L	95.8	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.06	0.06			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	1		1.068	mg/L	106.8	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	1	.54	1.53	mg/L	99	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	1	.54	1.505	mg/L	96.5	85	115	1.65	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.04997	mg/L	99.9	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0003	0.0003			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.05		.04689	mg/L	93.8	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.05	.0002	.04701	mg/L	93.6	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.05	.0002	.04737	mg/L	94.3	70	130	0.76	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	100		97.24	mg/L	97.2	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.6	0.6			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	49.96908		50.22	mg/L	100.5	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	49.96908	37.5	85.79	mg/L	96.6	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	49.96908	37.5	84.45	mg/L	94	85	115	1.57	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275ICV	ICV	07/18/08 1:47	II080717-3	2		1.9756	mg/L	98.8	95	105			
WG248275ICB	ICB	07/18/08 1:51				U	mg/L		-0.015	0.015			
WG248275LFB	LFB	07/18/08 2:03	II080708-3	.5		.5719	mg/L	114.4	85	115			
L70162-01AS	AS	07/18/08 2:10	II080708-3	.5	.158	.7308	mg/L	114.6	85	115			
L70162-01ASD	ASD	07/18/08 2:13	II080708-3	.5	.158	.7304	mg/L	114.5	85	115	0.05	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: OJ06DZ

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247567													
WG247567ICV	ICV	07/08/08 15:06	II080624-3	.00501		.00487	mg/L	97.2	95	105			
WG247567ICB	ICB	07/08/08 15:08				U	mg/L		-0.0002	0.0002			
WG247719													
WG247719LRB	LRB	07/08/08 18:34				U	mg/L		-0.00044	0.00044			
WG247719LFB	LFB	07/08/08 18:37	II080610-3	.002		.00184	mg/L	92	85	115			
L70263-01LFM	LFM	07/08/08 18:42	II080610-3	.002	U	.00185	mg/L	92.5	85	115			
L70263-01LFMD	LFMD	07/08/08 18:44	II080610-3	.002	U	.00187	mg/L	93.5	85	115	1.08	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		1.924	mg/L	96.2	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	.5		.485	mg/L	97	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	.5	U	.468	mg/L	93.6	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	.5	U	.463	mg/L	92.6	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
WG248360													
WG248360ICV	ICV	07/19/08 18:09	II080717-3	2		1.965	mg/L	98.3	95	105			
WG248360ICB	ICB	07/19/08 18:13				U	mg/L		-0.03	0.03			
WG248360LFB	LFB	07/19/08 18:25	II080708-3	.5		.559	mg/L	111.8	85	115			
L70292-01AS	AS	07/19/08 18:54	II080708-3	2.5	U	2.758	mg/L	110.3	85	115			
L70292-01ASD	ASD	07/19/08 19:03	II080708-3	2.5	U	2.773	mg/L	110.9	85	115	0.54	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
WG247998													
WG247998ICV	ICV	07/12/08 15:11	WI080613-1	2.416		2.454	mg/L	101.6	90	110			
WG247998ICB	ICB	07/12/08 15:13				U	mg/L		-0.06	0.06			
WG247999													
WG247999ICV	ICV	07/12/08 16:40	WI080613-1	2.416		2.399	mg/L	99.3	90	110			
WG247999ICB	ICB	07/12/08 16:41				U	mg/L		-0.06	0.06			
WG247999LFB	LFB	07/12/08 16:44	WI080312-1	2		2.001	mg/L	100.1	90	110			
L70124-01AS	AS	07/12/08 16:46	WI080312-1	2	U	1.977	mg/L	98.9	90	110			
L70257-01DUP	DUP	07/12/08 16:49			1.04	1.043	mg/L				0.3	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: **OJ06DZ**

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800LCSW3	LCSW	07/09/08 15:50	PCN29627	6		6.5	units	108.3	90	110			
WG247800LCSW6	LCSW	07/09/08 18:47	PCN29627	6		6.5	units	108.3	90	110			
WG247800LCSW9	LCSW	07/09/08 22:12	PCN29627	6		6.46	units	107.7	90	110			
L70295-01DUP	DUP	07/09/08 23:34			7.9	7.93	units				0.4	20	
WG247800LCSW12	LCSW	07/10/08 1:29	PCN29627	6		6.49	units	108.2	90	110			
WG247800LCSW15	LCSW	07/10/08 3:34	PCN29627	6		6.45	units	107.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	20		20.11	mg/L	100.6	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.9	0.9			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	99.76186		101.38	mg/L	101.6	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	99.76186	6.3	109.61	mg/L	103.6	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	99.76186	6.3	107.24	mg/L	101.2	85	115	2.19	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247679													
WG247679PBW	PBW	07/08/08 9:15				U	mg/L		-20	20			
WG247679LCSW	LCSW	07/08/08 9:17	PCN29985	260		274	mg/L	105.4	80	120			
L70296-01DUP	DUP	07/08/08 10:15			5150	5136	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
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.05188	mg/L	103.8	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0003	0.0003			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.05		.04881	mg/L	97.6	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.05	.0066	.05593	mg/L	98.7	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.05	.0066	.05561	mg/L	98	70	130	0.57	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	100		98.87	mg/L	98.9	95	105			
WG248224ICV	ICV	07/16/08 22:43	II080115-3	100		97	mg/L	97	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-6	6			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.9	0.9			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	98.21624		98	mg/L	99.8	85	115			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	98.21624		99.82	mg/L	101.6	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	98.21624	17.8	115.57	mg/L	99.5	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	98.21624	17.8	113.94	mg/L	97.9	85	115	1.42	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

Project ID: OJ06DZ

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247673													
WG247673PBW	PBW	07/08/08 9:50				U	mg/L		-30	30			
WG247673LCSW	LCSW	07/08/08 9:53	WC080514-1	100		96	mg/L	96	80	120			
L70295-02DUP	DUP	07/08/08 10:34			1350	1321	mg/L				2.2	20	
WG249150													
WG249150PBW	PBW	07/31/08 10:00				U	mg/L		-30	30			
WG249150LCSW	LCSW	07/31/08 10:03	WC080514-1	100		106	mg/L	106	80	120			
L70660-02DUP	DUP	07/31/08 10:33			U	U	mg/L				0	20	RA

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.05202	mg/L	104	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0003	0.0003			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.0501		.04683	mg/L	93.5	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.0501	U	.04722	mg/L	94.3	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.0501	U	.04734	mg/L	94.5	70	130	0.25	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346ICV	ICV	07/25/08 18:47	MS080714-1	.05		.04941	mg/L	98.8	90	110			
WG248346ICB	ICB	07/25/08 18:53				U	mg/L		-0.0003	0.0003			
WG248346LFB	LFB	07/25/08 19:05	MS080714-1	.05		.04604	mg/L	92.1	85	115			
L70281-02AS	AS	07/25/08 19:34	MS080714-1	.05	.0124	.06052	mg/L	96.2	70	130			
L70281-02ASD	ASD	07/25/08 19:39	MS080714-1	.05	.0124	.06068	mg/L	96.6	70	130	0.26	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	II080115-3	2		1.928	mg/L	96.4	95	105			
WG248224ICB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	II080708-3	.5		.504	mg/L	100.8	85	115			
L70264-01AS	AS	07/17/08 0:01	II080708-3	.5	.07	.562	mg/L	98.4	85	115			
L70264-01ASD	ASD	07/17/08 0:11	II080708-3	.5	.07	.553	mg/L	96.6	85	115	1.61	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70285-01	WG248346	Arsenic, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [$< \text{MDL}$].
	WG248224	Calcium, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248112	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 ($< 10\text{x MDL}$).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($< 10\text{x MDL}$).
L70285-02	WG248224	Calcium, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248112	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 ($< 10\text{x MDL}$).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($< 10\text{x MDL}$).
	WG249150	Sulfate	SM4500 SO4-D	C5	Confirmatory analysis was past holding time. Original result not confirmed.
			SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($< 10\text{x MDL}$).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70285**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70285
 Date Received: 7/3/2008
 Received By:
 Date Printed: 7/3/2008

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)
1903	2.8	14

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

Notes

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70285
 Date Received: 7/3/2008
 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
L70285-01	MH-28		Y		Y							<input type="checkbox"/>
L70285-02	MH-29		Y		Y							<input type="checkbox"/>

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.****L70285****CHAIN of CUSTODY**

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

Report to:Name: **Bill Dorris**Company: **Freeport McMoran Sierrita**E-mail: **billy-dorris@fmi.com**Address: **6200 W. Duval Mine Rd****Green Valley, AZ 85614**Telephone: **520-648-8873****Copy of Report to:**Name: **Dan Simpson**Company: **Hydro Geo Chem**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.

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

Quote #:

Project/PO #: **OJ06DZ**

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material?

of Containers

SAMPLE IDENTIFICATION**DATE:TIME****Matrix****MH-28****7-1-08 / 8:50****GW****5****MH-29****7-1-08 / 10:50****GW****5****AMBIENT-TB**

Matrix

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

REMARKS/ SAMPLE DISCLOSURES

- "Copy of Report" to Dan Simpson contains only "SQ" results with QC Summary.
- Please generate a third report containing "VRP-Suite" results with QC Summary and send to Rick Smith. Rick-Smith@URSCorp.com
- Please generate a fourth report containing "Quarterly Suite" results with QC Summary and send with "Ambient-TB" results to Bill Dorris.

PAGE

of

UPS TRACKING #1Z 867 7E4 23 1000 4897

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

RELINQUISHED BY:**DATE:TIME****RECEIVED BY:****DATE:TIME****Billy F. Dorris****7-2-08 / 15:00****ESB****7-3-08 10:12**

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

July 25, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70303- SULFATE ONLY

Bill Dorris:

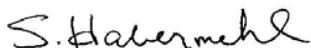
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 03, 2008. This project was assigned to ACZ's project number, L70303. Please reference this number in all future inquiries.

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 L70303. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-25A

ACZ Sample ID: **L70303-01**

Date Sampled: 07/02/08 09:52

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D		U	*	mg/L	10	50	07/08/08 11:11	gkj

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-25B

ACZ Sample ID: **L70303-02**

Date Sampled: 07/02/08 09:29

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1650			mg/L	10	50	07/09/08 16:18	ear

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-25C

ACZ Sample ID: **L70303-03**

Date Sampled: 07/02/08 08:55

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1330			mg/L	10	50	07/09/08 16:21	ear

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-26A

ACZ Sample ID: **L70303-04**

Date Sampled: 07/02/08 10:51

Date Received: 07/03/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	20	B		mg/L	10	50	07/09/08 16:25	ear

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-26B

ACZ Sample ID: **L70303-05**

Date Sampled: 07/02/08 10:40

Date Received: 07/03/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1660			mg/L	50	250	07/09/08 16:29	ear

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-26C

ACZ Sample ID: **L70303-06**

Date Sampled: 07/02/08 11:51

Date Received: 07/03/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	720			mg/L	10	50	07/09/08 16:32	ear

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: DUP070208A

ACZ Sample ID: **L70303-07**

Date Sampled: 07/02/08 00:00

Date Received: 07/03/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	720			mg/L	10	50	07/09/08 16:36	ear

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: **OJ06DZ**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800PBW2	PBW	07/09/08 18:32				U	mg/L		-20	20			
WG247800LCSW5	LCSW	07/09/08 18:44	WC080702-8	820		791.6	mg/L	96.5	90	110			
WG247800PBW3	PBW	07/09/08 21:57				U	mg/L		-20	20			
WG247800LCSW8	LCSW	07/09/08 22:09	WC080702-8	820		786.9	mg/L	96	90	110			
L70303-05DUP	DUP	07/10/08 1:06			86	85.9	mg/L				0.1	20	
WG247800PBW4	PBW	07/10/08 1:13				U	mg/L		-20	20			
WG247800LCSW11	LCSW	07/10/08 1:25	WC080702-8	820		795.9	mg/L	97.1	90	110			
L70309-08DUP	DUP	07/10/08 2:12			9	9.3	mg/L				3.3	20	RA
WG247800LCSW14	LCSW	07/10/08 3:30	WC080702-8	820		794	mg/L	96.8	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	2		1.97	mg/L	98.5	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.09	0.09			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	1		1.133	mg/L	113.3	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	1	.06	1.174	mg/L	111.4	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	1	.06	1.16	mg/L	110	85	115	1.2	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256ICV	ICV	07/18/08 6:32	MS080714-1	.02006		.02185	mg/L	108.9	90	110			
WG248256ICB	ICB	07/18/08 6:38				.00043	mg/L		-0.0012	0.0012			
WG248256LFB	LFB	07/18/08 6:50	MS080714-1	.01		.01088	mg/L	108.8	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.01	U	.01034	mg/L	103.4	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.01	U	.01084	mg/L	108.4	70	130	4.72	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.01	U	.01003	mg/L	100.3	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.01	U	.01007	mg/L	100.7	70	130	0.4	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256ICV	ICV	07/18/08 6:32	MS080714-1	.05		.0535	mg/L	107	90	110			
WG248256ICB	ICB	07/18/08 6:38				U	mg/L		-0.0015	0.0015			
WG248256LFB	LFB	07/18/08 6:50	MS080714-1	.05		.05108	mg/L	102.2	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.05	.001	.05575	mg/L	109.5	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.05	.001	.05637	mg/L	110.7	70	130	1.11	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.05	.0012	.05538	mg/L	108.4	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.05	.0012	.05584	mg/L	109.3	70	130	0.83	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: **OJ06DZ**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	2		1.9698	mg/L	98.5	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.009	0.009			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	.5		.5502	mg/L	110	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	.5	.018	.565	mg/L	109.4	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	.5	.018	.5564	mg/L	107.7	85	115	1.53	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256ICV	ICV	07/18/08 6:32	MS080714-1	.05		.05156	mg/L	103.1	90	110			
WG248256ICB	ICB	07/18/08 6:38				U	mg/L		-0.0003	0.0003			
WG248256LFB	LFB	07/18/08 6:50	MS080714-1	.05005		.04836	mg/L	96.6	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.05005	U	.04617	mg/L	92.2	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.05005	U	.04724	mg/L	94.4	70	130	2.29	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.05005	U	.04737	mg/L	94.6	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.05005	U	.04662	mg/L	93.1	70	130	1.6	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256ICV	ICV	07/18/08 6:32	MS080714-1	.05		.0523	mg/L	104.6	90	110			
WG248256ICB	ICB	07/18/08 6:38				U	mg/L		-0.0003	0.0003			
WG248256LFB	LFB	07/18/08 6:50	MS080714-1	.05		.0496	mg/L	99.2	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.05	U	.04812	mg/L	96.2	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.05	U	.04995	mg/L	99.9	70	130	3.73	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.05	U	.04736	mg/L	94.7	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.05	U	.04735	mg/L	94.7	70	130	0.02	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	100		95.32	mg/L	95.3	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.6	0.6			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	67.97008		71.3	mg/L	104.9	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	67.97008	31.6	101.12	mg/L	102.3	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	67.97008	31.6	100.15	mg/L	100.9	85	115	0.96	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: **OJ06DZ**

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248008													
WG248008ICV	ICV	07/12/08 21:11	WI071212-1	54.945		55.7	mg/L	101.4	90	110			
WG248008ICB	ICB	07/12/08 21:11				U	mg/L		-3	3			
WG248009													
WG248009ICV	ICV	07/12/08 22:04	WI071212-1	54.945		55.2	mg/L	100.5	90	110			
WG248009ICB	ICB	07/12/08 22:05				U	mg/L		-3	3			
WG248009LFB1	LFB	07/12/08 22:06	WI080620-3	30		29.9	mg/L	99.7	90	110			
WG248009LFB2	LFB	07/12/08 22:33	WI080620-3	30		29.7	mg/L	99	90	110			
L70295-03AS	AS	07/12/08 22:53	WI080620-3	1200	810	2051	mg/L	103.4	90	110			
L70295-04DUP	DUP	07/12/08 22:55			144	147.5	mg/L				2.4	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248465													
WG248465ICV	ICV	07/21/08 13:43	II080717-3	2		1.926	mg/L	96.3	95	105			
WG248465ICB	ICB	07/21/08 13:46				U	mg/L		-0.03	0.03			
WG248465LFB	LFB	07/21/08 13:59	II080708-3	.5		.536	mg/L	107.2	85	115			
L70303-01AS	AS	07/21/08 14:19	II080708-3	.5	U	.578	mg/L	115.6	85	115			MA
L70303-01ASD	ASD	07/21/08 14:29	II080708-3	.5	U	.57	mg/L	114	85	115	1.39	20	
WG248496													
WG248496ICV	ICV	07/21/08 21:49	II080717-3	2		2.047	mg/L	102.4	95	105			
WG248496ICB	ICB	07/21/08 21:52				U	mg/L		-0.03	0.03			
WG248496LFB	LFB	07/21/08 22:04	II080708-3	.5		.501	mg/L	100.2	85	115			
L70309-05AS	AS	07/21/08 22:26	II080708-3	.5		.526	mg/L	105.2	85	115			
L70309-05ASD	ASD	07/21/08 22:29	II080708-3	.5		.536	mg/L	107.2	85	115	1.88	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275ICV	ICV	07/18/08 1:47	II080717-3	2		1.915	mg/L	95.8	95	105			
WG248275ICB	ICB	07/18/08 1:51				U	mg/L		-0.03	0.03			
WG248275LFB	LFB	07/18/08 2:03	II080708-3	.5		.542	mg/L	108.4	85	115			
L70303-01AS	AS	07/18/08 3:04	II080708-3	.5	U	.537	mg/L	107.4	85	115			
L70303-01ASD	ASD	07/18/08 3:07	II080708-3	.5	U	.541	mg/L	108.2	85	115	0.74	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800LCSW1	LCSW	07/09/08 15:37	PCN28873	1408.8		1445	µmhos/cm	102.6	90	110			
WG247800LCSW4	LCSW	07/09/08 18:33	PCN28873	1408.8		1451	µmhos/cm	103	90	110			
WG247800LCSW7	LCSW	07/09/08 21:58	PCN28873	1408.8		1440	µmhos/cm	102.2	90	110			
L70303-05DUP	DUP	07/10/08 1:06			2950	2940	µmhos/cm				0.3	20	
WG247800LCSW10	LCSW	07/10/08 1:15	PCN28873	1408.8		1442	µmhos/cm	102.4	90	110			
L70309-08DUP	DUP	07/10/08 2:12			25	24.8	µmhos/cm				0.8	20	
WG247800LCSW13	LCSW	07/10/08 3:19	PCN28873	1408.8		1433	µmhos/cm	101.7	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: **OJ06DZ**

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	2		1.891	mg/L	94.6	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.03	0.03			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	.5		.548	mg/L	109.6	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	.5	U	.546	mg/L	109.2	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	.5	U	.537	mg/L	107.4	85	115	1.66	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248112													
WG248112ICV	ICV	07/15/08 11:43	WI080711-5	.3		.2787	mg/L	92.9	90	110			
WG248112ICB	ICB	07/15/08 11:43				U	mg/L		-0.015	0.015			
WG248038LRB	LRB	07/15/08 12:14				U	mg/L		-0.015	0.015			
WG248038LFB	LFB	07/15/08 12:14	WI080711-2	.2		.2024	mg/L	101.2	90	110			
L70263-02LFM	LFM	07/15/08 12:14	WI080711-2	.2	U	.208	mg/L	104	90	110			
L70319-01DUP	DUP	07/15/08 12:23			U	U	mg/L				0	20	RA
L70320-01LFM	LFM	07/15/08 12:23	WI080711-2	.2	.007	.1957	mg/L	94.4	90	110			
L70263-01DUP	DUP	07/15/08 12:47			.005	U	mg/L				0	20	RA

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248037													
WG248037ICV	ICV	07/14/08 13:48	WC080714-1	2		1.85	mg/L	92.5	90	110			
WG248037ICB	ICB	07/14/08 13:54				U	mg/L		-0.3	0.3			
WG248037LFB2	LFB	07/14/08 15:23	WC080515-3	5		4.88	mg/L	97.6	90	110			
L70295-03AS	AS	07/14/08 16:27	WC080515-3	5	.3	4.33	mg/L	80.6	90	110			M2
L70295-03DUP	DUP	07/14/08 16:34			.3	.3	mg/L				0	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275ICV	ICV	07/18/08 1:47	II080717-3	2		1.962	mg/L	98.1	95	105			
WG248275ICB	ICB	07/18/08 1:51				U	mg/L		-0.06	0.06			
WG248275LFB	LFB	07/18/08 2:03	II080708-3	1		1.121	mg/L	112.1	85	115			
L70303-01AS	AS	07/18/08 3:04	II080708-3	1	U	1.116	mg/L	111.6	85	115			
L70303-01ASD	ASD	07/18/08 3:07	II080708-3	1	U	1.121	mg/L	112.1	85	115	0.45	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256ICV	ICV	07/18/08 6:32	MS080714-1	.05		.04874	mg/L	97.5	90	110			
WG248256ICB	ICB	07/18/08 6:38				U	mg/L		-0.0003	0.0003			
WG248256LFB	LFB	07/18/08 6:50	MS080714-1	.05		.04668	mg/L	93.4	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.05	U	.0484	mg/L	96.8	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.05	U	.05026	mg/L	100.5	70	130	3.77	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.05	.0004	.04848	mg/L	96.2	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.05	.0004	.04928	mg/L	97.8	70	130	1.64	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: OJ06DZ

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	100		97.02	mg/L	97	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.6	0.6			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	49.96908		54	mg/L	108.1	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	49.96908	8.5	62.64	mg/L	108.3	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	49.96908	8.5	61.59	mg/L	106.2	85	115	1.69	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275ICV	ICV	07/18/08 1:47	II080717-3	2		1.9756	mg/L	98.8	95	105			
WG248275ICB	ICB	07/18/08 1:51				U	mg/L		-0.015	0.015			
WG248275LFB	LFB	07/18/08 2:03	II080708-3	.5		.5719	mg/L	114.4	85	115			
L70303-01AS	AS	07/18/08 3:04	II080708-3	.5	U	.5571	mg/L	111.4	85	115			
L70303-01ASD	ASD	07/18/08 3:07	II080708-3	.5	U	.5595	mg/L	111.9	85	115	0.43	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247567													
WG247567ICV	ICV	07/08/08 15:06	II080624-3	.00501		.00487	mg/L	97.2	95	105			
WG247567ICB	ICB	07/08/08 15:08				U	mg/L		-0.0002	0.0002			
WG247719													
WG247719LRB	LRB	07/08/08 18:34				U	mg/L		-0.00044	0.00044			
WG247719LFB	LFB	07/08/08 18:37	II080610-3	.002		.00184	mg/L	92	85	115			
L70295-03LFM	LFM	07/08/08 19:13	II080610-3	.002	U	.00201	mg/L	100.5	85	115			
L70295-03LFMD	LFMD	07/08/08 19:16	II080610-3	.002	U	.00202	mg/L	101	85	115	0.5	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275ICV	ICV	07/18/08 1:47	II080717-3	2		2	mg/L	100	95	105			
WG248275ICB	ICB	07/18/08 1:51				U	mg/L		-0.03	0.03			
WG248275LFB	LFB	07/18/08 2:03	II080708-3	.5		.53	mg/L	106	85	115			
L70303-01AS	AS	07/18/08 3:04	II080708-3	.5	U	.533	mg/L	106.6	85	115			
L70303-01ASD	ASD	07/18/08 3:07	II080708-3	.5	U	.514	mg/L	102.8	85	115	3.63	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248360													
WG248360ICV	ICV	07/19/08 18:09	II080717-3	2		1.965	mg/L	98.3	95	105			
WG248360ICB	ICB	07/19/08 18:13				U	mg/L		-0.03	0.03			
WG248360LFB	LFB	07/19/08 18:25	II080708-3	.5		.559	mg/L	111.8	85	115			
L70303-01AS	AS	07/19/08 19:26	II080708-3	2.5	U	2.834	mg/L	113.4	85	115			
L70303-01ASD	ASD	07/19/08 19:30	II080708-3	2.5	U	2.789	mg/L	111.6	85	115	1.6	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: **OJ06DZ**

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247998													
WG247998 CV	ICV	07/12/08 15:11	WI080613-1	2.416		2.454	mg/L	101.6	90	110			
WG247998 CB	ICB	07/12/08 15:13				U	mg/L		-0.06	0.06			
WG247999													
WG247999 CV	ICV	07/12/08 16:40	WI080613-1	2.416		2.399	mg/L	99.3	90	110			
WG247999 CB	ICB	07/12/08 16:41				U	mg/L		-0.06	0.06			
WG247999 LFB	LFB	07/12/08 16:44	WI080312-1	2		2.001	mg/L	100.1	90	110			
L70296-01AS	AS	07/12/08 17:36	WI080312-1	2	.45	2.272	mg/L	91.1	90	110			
L70301-01DUP	DUP	07/12/08 17:39			1.7	1.72	mg/L				1.2	20	RA

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247800													
WG247800 LCSW3	LCSW	07/09/08 15:50	PCN29627	6		6.5	units	108.3	90	110			
WG247800 LCSW6	LCSW	07/09/08 18:47	PCN29627	6		6.5	units	108.3	90	110			
WG247800 LCSW9	LCSW	07/09/08 22:12	PCN29627	6		6.46	units	107.7	90	110			
L70303-05DUP	DUP	07/10/08 1:06			8.2	8.24	units				0.5	20	
WG247800 LCSW12	LCSW	07/10/08 1:29	PCN29627	6		6.49	units	108.2	90	110			
L70309-08DUP	DUP	07/10/08 2:12			7.6	7.6	units				0	20	
WG247800 LCSW15	LCSW	07/10/08 3:34	PCN29627	6		6.45	units	107.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226 CV	ICV	07/17/08 1:02	II080115-3	20		20.09	mg/L	100.5	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.9	0.9			
WG248226 LFB	LFB	07/17/08 1:18	II080708-3	99.76186		112.89	mg/L	113.2	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	99.76186	3	119.3	mg/L	116.6	85	115			MA
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	99.76186	3	117.06	mg/L	114.3	85	115	1.9	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247783													
WG247783 PBW	PBW	07/09/08 11:35				U	mg/L		-20	20			
WG247783 LCSW	LCSW	07/09/08 11:37	PCN30197	260		264	mg/L	101.5	80	120			
L70303-07DUP	DUP	07/09/08 12:35			1320	1328	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
WG248256													
WG248256 CV	ICV	07/18/08 6:32	MS080714-1	.05		.05285	mg/L	105.7	90	110			
WG248256 CB	ICB	07/18/08 6:38				U	mg/L		-0.0003	0.0003			
WG248256 LFB	LFB	07/18/08 6:50	MS080714-1	.05		.04621	mg/L	92.4	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.05	U	.05061	mg/L	101.2	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.05	U	.04894	mg/L	97.9	70	130	3.36	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.05	.0023	.05476	mg/L	104.9	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.05	.0023	.05545	mg/L	106.3	70	130	1.25	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

Project ID: OJ06DZ

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	100		99.57	mg/L	99.6	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.9	0.9			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	98.21624		110.45	mg/L	112.5	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	98.21624	37.2	144.55	mg/L	109.3	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	98.21624	37.2	142.44	mg/L	107.2	85	115	1.47	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247673													
WG247673PBW	PBW	07/08/08 9:50				U	mg/L		-30	30			
WG247673LCSW	LCSW	07/08/08 9:53	WC080514-1	100		96	mg/L	96	80	120			
L70303-01DUP	DUP	07/08/08 11:15			U	U	mg/L				0	20	RA
WG247821													
WG247821PBW	PBW	07/09/08 16:00				U	mg/L		-30	30			
WG247821LCSW	LCSW	07/09/08 16:03	WC080514-1	100		96	mg/L	96	80	120			
L70313-01DUP	DUP	07/09/08 16:43			2090	2021	mg/L				3.4	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256ICV	ICV	07/18/08 6:32	MS080714-1	.05		.05319	mg/L	106.4	90	110			
WG248256ICB	ICB	07/18/08 6:38				U	mg/L		-0.0003	0.0003			
WG248256LFB	LFB	07/18/08 6:50	MS080714-1	.0501		.04533	mg/L	90.5	85	115			
L70274-01AS	AS	07/18/08 7:01	MS080714-1	.0501	U	.04697	mg/L	93.8	70	130			
L70274-01ASD	ASD	07/18/08 7:07	MS080714-1	.0501	U	.04871	mg/L	97.2	70	130	3.64	20	
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.0501	U	.04723	mg/L	94.3	70	130			
L70303-06ASD	ASD	07/18/08 8:29	MS080714-1	.0501	U	.04784	mg/L	95.5	70	130	1.28	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226ICV	ICV	07/17/08 1:02	II080115-3	2		1.9	mg/L	95	95	105			
WG248226ICB	ICB	07/17/08 1:05				U	mg/L		-0.03	0.03			
WG248226LFB	LFB	07/17/08 1:18	II080708-3	.5		.536	mg/L	107.2	85	115			
L70303-01AS	AS	07/17/08 2:18	II080708-3	.5	U	.527	mg/L	105.4	85	115			
L70303-01ASD	ASD	07/17/08 2:28	II080708-3	.5	U	.524	mg/L	104.8	85	115	0.57	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L70303

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70303-01	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG247999	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).
L70303-02	WG247673	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).
	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70303-03	WG247999	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).
	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70303-04	WG247999	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).
	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: L70303

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70303-04	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG247999	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).
L70303-05	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG247999	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).
L70303-06	WG248465	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.
	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG247999	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).
	WG247800	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70303-07	WG248360	Nickel, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG248226	Potassium, 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.
	WG248112	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).
	WG248037	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG247999	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).
	WG247800	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70303**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70303
Date Received: 7/3/2008
Received By:
Date Printed: 7/3/2008

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)
2084	4.8	14

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

Notes

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70303
 Date Received: 7/3/2008
 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
L70303-01	MH-25A		Y		Y							<input type="checkbox"/>
L70303-02	MH-25B		Y		Y							<input type="checkbox"/>
L70303-03	MH-25C		Y		Y							<input type="checkbox"/>
L70303-04	MH-26A		Y		Y							<input type="checkbox"/>
L70303-05	MH-26B		Y		Y							<input type="checkbox"/>
L70303-06	MH-26C		Y		Y							<input type="checkbox"/>
L70303-07	DUP070208A		Y		Y							<input type="checkbox"/>

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: _____

**Laboratories, Inc.****L740303****CHAIN of CUSTODY**

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

Report to:

Name: Bill Dorris
Company: Freeport McMoran Sierrita
E-mail: billy-dorris@fmi.com

Address: 6200 W. Duval Mine Rd
Green Valley, AZ 85614
Telephone: 520 648 8873

Copy of Report to:

Name: Dan Simpson
Company: Hydro Geo Chem

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.

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

Quote #:

Project/PO #: 0506DZ

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material?

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers																	
MH-25A	7-2-08 / 9:52	GW	5	} AMBIENT - TB																
MH-25B	7-2-08 / 9:29	GW	5																	
MH-25C	7-2-08 / 8:55	GW	5																	
MH-26A	7-2-08 / 10:51	GW	5																	
MH-26B	7-2-08 / 10:40	GW	5																	
MH-26C	7-2-08 / 11:51	GW	5																	
DUP070208A	7-2-08 /	GW	5																	

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

REMARKS/ SAMPLE DISCLOSURES

"Copy of Report" to Dan Simpson contains only "SD" results with QC Summary.

UPS TRACKING # 1Z 867 7E4 23 1000 4904

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

RELINQUISHED BY:**DATE:TIME****RECEIVED BY:****DATE:TIME**

Billy F. Dorris 7-2-08/15:00 WIL 7-3-08 10:24

July 25, 2008

Report to:

Dan Simpson
Hydro Geo Chem Inc.
51 W. Wetmore Rd.
Tucson, AZ 85705

Bill to:

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

cc: Ned Hall, Bill Dorris, Jim Norris

Project ID: OJ03Z5

ACZ Project ID: L70337

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 08, 2008. This project has been assigned to ACZ's project number, L70337. Please reference this number in all future inquiries.

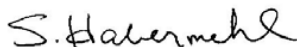
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L70337. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 25, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: GV-01-GVDWID-F

ACZ Sample ID: **L70337-01**

Date Sampled: 07/07/08 08:53

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	45.2		*	mg/L	0.5	3	07/22/08 21:31	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: GV-01-GVDWID

ACZ Sample ID: **L70337-02**

Date Sampled: 07/07/08 08:53

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	45.0		*	mg/L	0.5	3	07/22/08 22:26	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5
Sample ID: GV-02-GVDWID-F

ACZ Sample ID: **L70337-03**
Date Sampled: 07/07/08 09:41
Date Received: 07/08/08
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	93.2		*	mg/L	0.5	3	07/22/08 22:44	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: GV-02-GVDWID

ACZ Sample ID: **L70337-04**

Date Sampled: 07/07/08 09:41

Date Received: 07/08/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	92.9		*	mg/L	0.5	3	07/22/08 23:02	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: GV-SI-GVDWID-F

ACZ Sample ID: **L70337-05**

Date Sampled: 07/07/08 10:30

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography		U	*	mg/L	0.5	3	07/22/08 23:20	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: GV-SI-GVDWID

ACZ Sample ID: **L70337-06**

Date Sampled: 07/07/08 10:30

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	6.2		*	mg/L	0.5	3	07/23/08 16:37	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CC OF GV-F

ACZ Sample ID: **L70337-07**

Date Sampled: 07/07/08 12:36

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	119		*	mg/L	1	5	07/23/08 16:55	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CC OF GV

ACZ Sample ID: **L70337-08**

Date Sampled: 07/07/08 12:36

Date Received: 07/08/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	116		*	mg/L	1	5	07/23/08 17:13	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: HAVEN GOLF-F

ACZ Sample ID: **L70337-09**

Date Sampled: 07/07/08 13:35

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	112		*	mg/L	1	5	07/23/08 17:31	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: HAVEN GOLF

ACZ Sample ID: **L70337-10**

Date Sampled: 07/07/08 13:35

Date Received: 07/08/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	91		*	mg/L	1	5	07/23/08 17:49	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70337**

Project ID: OJ03Z5

Sulfate

300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248568													
WG248568ICV	ICV	07/22/08 17:18	WI080521-1	50.1		52.58	mg/L	105	90	110			
WG248568ICB	ICB	07/22/08 17:36				.58	mg/L		-1.5	1.5			
L70337-01AS	AS	07/22/08 21:50	WI080702-9	30	45.2	70.76	mg/L	85.2	90	110			M2
L70337-01DUP	DUP	07/22/08 22:08			45.2	45.11	mg/L				0.2	20	
WG248568LFB	LFB	07/23/08 16:19	WI080702-9	30		28.93	mg/L	96.4	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70337**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70337-01	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-02	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-03	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-04	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-05	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-06	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-07	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-08	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-09	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70337-10	WG248568	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70337**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
OJ03Z5

ACZ Project ID: L70337
Date Received: 7/8/2008
Received By:
Date Printed: 7/8/2008

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)
NA6423	3.1	13

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

Notes

FMI Gold & Copper - Sierrita
OJ03Z5

ACZ Project ID: L70337
Date Received: 7/8/2008
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
L70337-01	GV-01-GVDWID-F									X		<input type="checkbox"/>
L70337-02	GV-01-GVDWID									X		<input type="checkbox"/>
L70337-03	GV-02-GVDWID-F									X		<input type="checkbox"/>
L70337-04	GV-02-GVDWID									X		<input type="checkbox"/>
L70337-05	GV-SI-GVDWID-F									X		<input type="checkbox"/>
L70337-06	GV-SI-GVDWID									X		<input type="checkbox"/>
L70337-07	CC OF GV-F									X		<input type="checkbox"/>
L70337-08	CC OF GV									X		<input type="checkbox"/>
L70337-09	HAVEN GOLF-F									X		<input type="checkbox"/>
L70337-10	HAVEN GOLF									X		<input type="checkbox"/>

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.**

L70339

CHAIN of CUSTODY

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

Report to:

Name:

Dan Simpson

Company:

Hydro Geo Chem Inc.

E-mail:

dans@hgcinc.com

Address:

51 W. Wetmore Rd

Tucson, AZ 85705

Telephone:

(520) 293-1500 x133

Copy of Report to:

Name:

Ned Hall/Billy Dorris/Jim Norris

Company:

FMT / HGL

E-mail:

jimn@hgcinc.com/billy-dorris@fmi.com

Telephone:

520/293-1500x112/520/648-8873

Invoice to:

Name:

Ned Hall

Company:

FMT

E-mail:

nedahall@fmi.com

Address:

6200 W. Duval Mine Rd

PO Box 527 Green Valley, AZ 85622

Telephone:

520/648-8857

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.

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

Quote #:

Sierrita Sulfate

Project/PO #:

OJQ3Z5

Reporting state for compliance testing:

AZ

Sampler's Name:

Mark Arneson

Are any samples NRC licensable material?

No

SAMPLE IDENTIFICATION**DATE:TIME****Matrix**

of Containers

504

GV-01-GVDWID-F

7-7-08: 8:53

GW

1

X

GV-01-GVDWID

7-7-08: 8:53

GW

1

X

GV-02-GVDWID-F

7-7-08: 9:41

GW

1

X

GV-02-GVDWID

7-7-08: 9:41

GW

1

X

GV-SI-GVDWID-F

7-7-08: 10:30

GW

1

X

GV-SI-GVDWID

7-7-08: 10:30

GW

1

X

CC of GV-F

7-7-08: 12:36

GW

1

X

CC of GV

7-7-08: 12:36

GW

1

X

HAVEN GOLF-F

7-7-08: 13:35

GW

1

X

HAVEN GOLF

7-7-08: 13:35

GW

1

X

Matrix

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

REMARKS/ SAMPLE DISCLOSURES

PAGE

of

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

RELINQUISHED BY:**DATE:TIME****RECEIVED BY:****DATE:TIME**

7-7-08: 14:10



7-8-08 9:55

July 29, 2008

Report to:

Dan Simpson
Hydro Geo Chem Inc.
51 W. Wetmore Rd.
Tucson, AZ 85705

Bill to:

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

cc: Jim Norris, Ned Hall, Bill Dorris

Project ID: OJ03Z5

ACZ Project ID: L70408

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 10, 2008. This project has been assigned to ACZ's project number, L70408. Please reference this number in all future inquiries.

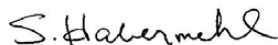
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L70408. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 29, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-10F

ACZ Sample ID: **L70408-01**

Date Sampled: 07/08/08 09:47

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	50.5			mg/L	0.5	3	07/23/08 21:09	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-10

ACZ Sample ID: **L70408-02**

Date Sampled: 07/08/08 09:47

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	50.0			mg/L	0.5	3	07/23/08 21:27	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-6F

ACZ Sample ID: **L70408-03**

Date Sampled: 07/08/08 10:30

Date Received: 07/10/08

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	07/23/08 21:45	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-6

ACZ Sample ID: **L70408-04**

Date Sampled: 07/08/08 10:30

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	47.7			mg/L	0.5	3	07/23/08 22:03	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-9F

ACZ Sample ID: **L70408-05**

Date Sampled: 07/08/08 11:35

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	44.1			mg/L	0.5	3	07/23/08 22:57	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-9

ACZ Sample ID: **L70408-06**

Date Sampled: 07/08/08 11:35

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	44.0			mg/L	0.5	3	07/23/08 23:16	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-8F

ACZ Sample ID: **L70408-07**

Date Sampled: 07/08/08 12:33

Date Received: 07/10/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	504			mg/L	5	30	07/24/08 12:18	aml

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-8

ACZ Sample ID: **L70408-08**

Date Sampled: 07/08/08 12:33

Date Received: 07/10/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	463			mg/L	5	30	07/28/08 16:25	aml

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: DUP-070808F

ACZ Sample ID: **L70408-09**

Date Sampled: 07/08/08 00:00

Date Received: 07/10/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	910			mg/L	10	50	07/28/08 16:43	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5
Sample ID: DUP-070808

ACZ Sample ID: **L70408-10**
Date Sampled: 07/08/08 00:00
Date Received: 07/10/08
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	920			mg/L	10	50	07/28/08 17:01	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5
Sample ID: EQB-070808

ACZ Sample ID: **L70408-11**
Date Sampled: 07/08/08 00:00
Date Received: 07/10/08
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	2.1	B		mg/L	0.5	3	07/28/08 3:13	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5
Sample ID: FB-070808

ACZ Sample ID: **L70408-12**
Date Sampled: 07/08/08 00:00
Date Received: 07/10/08
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography		U		mg/L	0.5	3	07/28/08 3:31	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: TMM-1F

ACZ Sample ID: **L70408-13**

Date Sampled: 07/09/08 10:48

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	7.3			mg/L	0.5	3	07/28/08 3:49	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: TMM-1

ACZ Sample ID: **L70408-14**

Date Sampled: 07/09/08 10:48

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	7.0			mg/L	0.5	3	07/25/08 1:56	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-7F

ACZ Sample ID: **L70408-15**

Date Sampled: 07/08/08 13:18

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	890		*	mg/L	10	50	07/25/08 2:32	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-7

ACZ Sample ID: **L70408-16**

Date Sampled: 07/08/08 13:18

Date Received: 07/10/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	800		*	mg/L	10	50	07/25/08 4:02	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70408**

Project ID: OJ03Z5

Sulfate

300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248573													
WG248573ICV	ICV	07/23/08 18:44	WI080521-1	50.1		52.29	mg/L	104.4	90	110			
WG248573ICB	ICB	07/23/08 19:02				U	mg/L		-1.5	1.5			
WG248573LFB	LFB	07/23/08 19:20	WI080702-9	30		29.8	mg/L	99.3	90	110			
L70297-01AS	AS	07/23/08 19:56	WI080702-9	30	6.1	34.78	mg/L	95.6	90	110			
L70297-01DUP	DUP	07/23/08 20:14			6.1	6.15	mg/L				0.8	20	
WG248704													
WG248704ICV	ICV	07/24/08 20:11	WI080521-1	50.1		50.7	mg/L	101.2	90	110			
WG248704ICB	ICB	07/24/08 20:29				U	mg/L		-1.5	1.5			
WG248704LFB	LFB	07/24/08 20:48	WI080702-9	30		32.02	mg/L	106.7	90	110			
L67329-25AS	AS	07/24/08 21:24	WI080702-9	30	17.7	45.68	mg/L	93.3	90	110			
L67329-25DUP	DUP	07/24/08 21:42			17.7	16.93	mg/L				4.4	20	
L70408-15AS	AS	07/25/08 2:50	WI080702-9	600	890	1248	mg/L	59.7	90	110			M2
L70408-15DUP	DUP	07/25/08 3:08			890	902	mg/L				1.3	20	
WG248877													
WG248877ICV	ICV	07/28/08 1:06	WI080521-1	50.1		53.46	mg/L	106.7	90	110			
WG248877ICB	ICB	07/28/08 1:24				U	mg/L		-1.5	1.5			
WG248877LFB	LFB	07/28/08 1:42	WI080702-9	30		31.99	mg/L	106.6	90	110			
L70537-01DUP	DUP	07/28/08 5:19			53.3	53.82	mg/L				1	20	
L70589-01AS	AS	07/28/08 17:37	WI080702-9	150	106	244.9	mg/L	92.6	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70408**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70408-15	WG248704	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.
L70408-16	WG248704	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70408**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ03Z5

ACZ Project ID: L70408
 Date Received: 7/10/2008
 Received By:
 Date Printed: 7/10/2008

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)
2217	0.7	13

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

Notes

FMI Gold & Copper - Sierrita
OJ03Z5

ACZ Project ID: L70408
Date Received: 7/10/2008
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
L70408-01	CW-10F									X		<input type="checkbox"/>
L70408-02	CW-10									X		<input type="checkbox"/>
L70408-03	CW-6F									X		<input type="checkbox"/>
L70408-04	CW-6									X		<input type="checkbox"/>
L70408-05	CW-9F									X		<input type="checkbox"/>
L70408-06	CW-9									X		<input type="checkbox"/>
L70408-07	CW-8F									X		<input type="checkbox"/>
L70408-08	CW-8									X		<input type="checkbox"/>
L70408-09	DUP-070808F									X		<input type="checkbox"/>
L70408-10	DUP-070808									X		<input type="checkbox"/>
L70408-11	EQB-070808									X		<input type="checkbox"/>
L70408-12	FB-070808									X		<input type="checkbox"/>
L70408-13	TMM-1F									X		<input type="checkbox"/>
L70408-14	TMM-1									X		<input type="checkbox"/>
L70408-15	CW-7F									X		<input type="checkbox"/>
L70408-16	CW-7									X		<input type="checkbox"/>

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.**

L70408

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

CHAIN of CUSTODY**Report to:**

Name: Dan Simpson
Company: Hydro Geo Chem, Inc.
E-mail: dans@hgc-inc.com

Address: 51 W. Wetmore Rd.
Tucson, AZ 85705
Telephone: (520) 293-1500 x133

Copy of Report to:

Name: Jim Norris/Ned Hall/Billy Dorris
Company: FMI/HGC

E-mail: Jimn@hgc-inc.com/billy-dorris@fmi.com
Telephone: 520) 293-1500 x112 / 520) 648-8873

Invoice to:

Name: Ned Hall
Company: FMI
E-mail: ned-hall@fmi.com

Address: 6200 Duval Mine Rd.
PO Box 527 Green Valley, AZ 85622
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.

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

Quote #: Sierrita Sulfate
Project/PO #: OJ03Z5
Reporting state for compliance testing: AZ
Sampler's Name: Mark Arneson
Are any samples NRC licensable material? No

SAMPLE IDENTIFICATION			DATE:TIME	Matrix	# of Containers														
CW-10F			7-8-08: 9:47	GW	1	X													
CW-10			7-8-08: 9:47	GW	1	X													
CW-6F			7-8-08: 10:30	GW	1	X													
CW-6			7-8-08: 10:30	GW	1	X													
CW-9F			7-8-08: 11:35	GW	1	X													
CW-9			7-8-08: 11:35	GW	1	X													
CW-8F			7-8-08: 12:33	GW	1	X													
CW-8			7-8-08: 12:33	GW	1	X													
DUP-070808F			7-8-08:	GW	1	X													
DUP-070808			7-8-08:	GW	1	X													

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

REMARKS/ SAMPLE DISCLOSURES

PAGE

1 of 2

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

RELINQUISHED BY:**DATE:TIME****RECEIVED BY:****DATE:TIME**

[Signature] 7-8-08: 12:00 [Signature] 7-10-08 10:14

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

Report to:

Name:	Same as Page 1	Address:
Company:		Telephone:
E-mail:		

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.



PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

[illegible]

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

REMARKS/ SAMPLE DISCLOSURES

<div style="text-align: right; border: 1px solid black; padding: 2px;"> PAGE 2 of 2 </div>	
Please refer to ACZ's terms & conditions located on the reverse side of this COC.	
RELINQUISHED BY:	DATE: TIME
	7-9-08: 12:00
RECEIVED BY:	DATE: TIME
	7/10/08 10:14

July 28, 2008

Report to:

Dan Simpson
Hydro Geo Chem Inc.
51 W. Wetmore Rd.
Tucson, AZ 85705

Bill to:

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

cc: Jim Norris, Ned Hall, Bill Dorris

Project ID: OJ03Z5

ACZ Project ID: L70455

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 12, 2008. This project has been assigned to ACZ's project number, L70455. Please reference this number in all future inquiries.

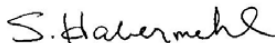
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L70455. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 28, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-3F

ACZ Sample ID: **L70455-01**

Date Sampled: 07/11/08 10:35

Date Received: 07/12/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	56.7		*	mg/L	0.5	3	07/25/08 5:33	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: CW-3

ACZ Sample ID: **L70455-02**

Date Sampled: 07/11/08 10:35

Date Received: 07/12/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	56.7		*	mg/L	0.5	3	07/25/08 5:51	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: NP-2F

ACZ Sample ID: **L70455-03**

Date Sampled: 07/11/08 13:15

Date Received: 07/12/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	40.5		*	mg/L	0.5	3	07/25/08 6:09	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

Sample ID: NP-2

ACZ Sample ID: **L70455-04**

Date Sampled: 07/11/08 13:15

Date Received: 07/12/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	40.8		*	mg/L	0.5	3	07/25/08 6:27	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70455**

Project ID: OJ03Z5

Sulfate

300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248704													
WG248704ICV	ICV	07/24/08 20:11	WI080521-1	50.1		50.7	mg/L	101.2	90	110			
WG248704ICB	ICB	07/24/08 20:29				U	mg/L		-1.5	1.5			
WG248704LFB	LFB	07/24/08 20:48	WI080702-9	30		32.02	mg/L	106.7	90	110			
L67329-26DUP	DUP	07/24/08 22:18			13.9	16.17	mg/L				15.1	20	
L70408-15AS	AS	07/25/08 2:50	WI080702-9	600	890	1248	mg/L	59.7	90	110			M2

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70455**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70455-01	WG248704	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70455-02	WG248704	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70455-03	WG248704	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70455-04	WG248704	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70455**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
OJ03Z5

ACZ Project ID: L70455
Date Received: 7/12/2008
Received By:
Date Printed: 7/12/2008

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)
NA6450	2.3	14

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

Notes

FMI Gold & Copper - Sierrita
 OJ03Z5

ACZ Project ID: L70455
 Date Received: 7/12/2008
 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
L70455-01	CW-3F									X		<input type="checkbox"/>
L70455-02	CW-3									X		<input type="checkbox"/>
L70455-03	NP-2F									X		<input type="checkbox"/>
L70455-04	NP-2									X		<input type="checkbox"/>

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: _____

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

Report to:

Name: Dan Simpson
Company: Hydro GeoChem Inc
E-mail: dans@hgcinc.com

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: (520) 293-1500 x133

Copy of Report to:

Name: Jim Norris / Ned Hall / Billy Dorris
Company: HGL / FMI

E-mail: jim@hgcinc.com / billy-davis@fmi.com
Telephone: 520/293-1500 520/644-8873

Invoice to:

Name: Ned Hall
Company: FMI
E-mail: ned-hall@Fmi.com

Address: 6200 Duval Mine Rd
PO Box 527 Green Valley, AZ 85622
Telephone: 520) 648-8873

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	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>

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.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierrita Sulfate
Project/PO #: OTJ0325
Reporting state for compliance testing:
Sampler's Name: Mark Arneson
Are any samples NRC licensable material?

of Containers

1504

SAMPLE IDENTIFICATION	DATE:TIME	Matrix
-----------------------	-----------	--------

CW-3F	7-11-08: 10:35	GLW
CW-3	7-11-08: 10:35	GLW
NP-2F	7-11-08: 13:15	GLW
NP-2	7-11-08: 13:15	GLW

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

REMARKS/ SAMPLE DISCLOSURES

PAGE

/ of

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

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

July 29, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70487- SULFATE ONLY

Bill Dorris:

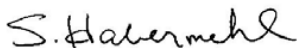
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 15, 2008. This project was assigned to ACZ's project number, L70487. Please reference this number in all future inquiries.

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 L70487. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: PZ-7

ACZ Sample ID: **L70487-01**

Date Sampled: 07/11/08 10:20

Date Received: 07/15/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	400			mg/L	10	50	07/17/08 10:31	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: DUP071108A

ACZ Sample ID: **L70487-02**

Date Sampled: 07/11/08 00:00

Date Received: 07/15/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	400			mg/L	10	50	07/17/08 10:35	tbd

Arizona license number: **AZ0102**

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454PBW1	PBW	07/21/08 14:25				25.3	mg/L		-20	20			B4
WG248454LCSW2	LCSW	07/21/08 14:37	WC080702-8	820		786	mg/L	95.9	90	110			
L70504-07DUP	DUP	07/21/08 16:10			457	457.6	mg/L				0.1	20	
WG248454PBW2	PBW	07/21/08 17:31				U	mg/L		-20	20			
WG248454LCSW5	LCSW	07/21/08 17:44	WC080702-8	820		789.7	mg/L	96.3	90	110			
WG248454PBW3	PBW	07/21/08 20:42				U	mg/L		-20	20			
WG248454LCSW8	LCSW	07/21/08 20:55	WC080702-8	820		789.2	mg/L	96.2	90	110			
WG248454PBW4	PBW	07/22/08 0:15				U	mg/L		-20	20			
WG248454LCSW11	LCSW	07/22/08 0:27	WC080702-8	820		796.8	mg/L	97.2	90	110			
WG248454LCSW14	LCSW	07/22/08 3:39	WC080702-8	820		798.5	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
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	2		2.069	mg/L	103.5	95	105			
WG248737ICB	ICB	07/24/08 22:33				.055	mg/L		-0.09	0.09			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	1		1.097	mg/L	109.7	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	1	.03	1.116	mg/L	108.6	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	1	.03	1.147	mg/L	111.7	85	115	2.74	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.02006		.02152	mg/L	107.3	90	110			
WG248594ICB	ICB	07/25/08 6:29				.00051	mg/L		-0.0012	0.0012			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.01		.01044	mg/L	104.4	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.01	U	.01012	mg/L	101.2	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.01	U	.01041	mg/L	104.1	70	130	2.83	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.05414	mg/L	108.3	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0015	0.0015			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.05452	mg/L	109	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05	.0044	.06101	mg/L	113.2	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05	.0044	.06128	mg/L	113.8	70	130	0.44	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	2		2.0743	mg/L	103.7	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.009	0.009			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	.5		.5059	mg/L	101.2	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	.5	.007	.5078	mg/L	100.2	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	.5	.007	.508	mg/L	100.2	85	115	0.04	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: OJ06DZ

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.04974	mg/L	99.5	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05005		.04755	mg/L	95	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05005	U	.04949	mg/L	98.9	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05005	U	.04932	mg/L	98.5	70	130	0.34	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.05112	mg/L	102.2	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.05161	mg/L	103.2	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05	U	.0522	mg/L	104.4	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05	U	.05221	mg/L	104.4	70	130	0.02	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	II080717-3	100		99.26	mg/L	99.3	95	105			
WG248802ICB	ICB	07/25/08 17:07				U	mg/L		-0.6	0.6			
WG248802LFB	LFB	07/25/08 17:19	II080724-3	67.97008		77.22	mg/L	113.6	85	115			
L70485-08AS	AS	07/25/08 17:26	II080724-3	67.97008	21.6	96.68	mg/L	110.5	85	115			
L70485-08ASD	ASD	07/25/08 17:29	II080724-3	67.97008	21.6	93.6	mg/L	105.9	85	115	3.24	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248487													
WG248487ICB	ICB	07/21/08 11:30				U	mg/L		-3	3			
WG248487ICV	ICV	07/21/08 11:30	WI071212-1	54.945		57.2	mg/L	104.1	90	110			
WG248487LFB1	LFB	07/21/08 15:02	WI080620-3	30		30.9	mg/L	103	90	110			
L70410-02DUP	DUP	07/21/08 15:03			24	24.8	mg/L				3.3	20	
WG248487LFB2	LFB	07/21/08 15:06	WI080620-3	30		30.8	mg/L	102.7	90	110			
L70410-01AS	AS	07/21/08 15:22	10XCL	30	140	164	mg/L	80	90	110			M3

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	II080717-3	2		1.98	mg/L	99	95	105			
WG248802ICB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	II080724-3	.5		.529	mg/L	105.8	85	115			
L70485-08AS	AS	07/25/08 17:26	II080724-3	.5	U	.52	mg/L	104	85	115			
L70485-08ASD	ASD	07/25/08 17:29	II080724-3	.5	U	.5	mg/L	100	85	115	3.92	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: **OJ06DZ**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	II080717-3	2		1.93	mg/L	96.5	95	105			
WG248802ICB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	II080724-3	.5		.522	mg/L	104.4	85	115			
L70485-08AS	AS	07/25/08 17:26	II080724-3	.5	U	.511	mg/L	102.2	85	115			
L70485-08ASD	ASD	07/25/08 17:29	II080724-3	.5	U	.502	mg/L	100.4	85	115	1.78	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454LCSW1	LCSW	07/21/08 14:27	PCN29501	1408.8		1459	µmhos/cm	103.6	90	110			
L70504-07DUP	DUP	07/21/08 16:10			3240	3250	µmhos/cm				0.3	20	
WG248454LCSW4	LCSW	07/21/08 17:33	PCN29501	1408.8		1456	µmhos/cm	103.4	90	110			
WG248454LCSW7	LCSW	07/21/08 20:44	PCN29501	1408.8		1455	µmhos/cm	103.3	90	110			
WG248454LCSW10	LCSW	07/22/08 0:16	PCN29501	1408.8		1455	µmhos/cm	103.3	90	110			
WG248454LCSW13	LCSW	07/22/08 3:29	PCN29501	1408.8		1453	µmhos/cm	103.1	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	2		1.984	mg/L	99.2	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.03	0.03			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	.5		.503	mg/L	100.6	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	.5	U	.5	mg/L	100	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	.5	U	.504	mg/L	100.8	85	115	0.8	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248577													
WG248577ICV	ICV	07/22/08 15:17	WI080711-5	.3		.2818	mg/L	93.9	90	110			
WG248577ICB	ICB	07/22/08 15:17				U	mg/L		-0.015	0.015			
WG248457LRB	LRB	07/22/08 15:36				U	mg/L		-0.015	0.015			
WG248457LFB	LFB	07/22/08 15:36	WI080711-2	.2		.1996	mg/L	99.8	90	110			
L70487-01DUP	DUP	07/22/08 15:41			U	U	mg/L				0	20	RA
L70487-02LFM	LFM	07/22/08 15:41	WI080711-2	.2	U	.185	mg/L	92.5	90	110			

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248272													
WG248272ICV	ICV	07/17/08 12:37	WC080714-1	2		1.99	mg/L	99.5	90	110			
WG248272ICB	ICB	07/17/08 12:43				U	mg/L		-0.3	0.3			
WG248272LFB1	LFB	07/17/08 12:49	WC080716-3	5		5.17	mg/L	103.4	90	110			
WG248272LFB2	LFB	07/17/08 14:58	WC080716-3	5		5.08	mg/L	101.6	90	110			
L70476-02AS	AS	07/17/08 15:53	WC080716-3	5	.4	5.03	mg/L	92.6	90	110			
L70476-02DUP	DUP	07/17/08 16:01			.4	.37	mg/L				7.8	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: OJ06DZ

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	II080717-3	2		1.938	mg/L	96.9	95	105			
WG248802ICB	ICB	07/25/08 17:07				U	mg/L		-0.06	0.06			
WG248802LFB	LFB	07/25/08 17:19	II080724-3	1		1.082	mg/L	108.2	85	115			
L70485-08AS	AS	07/25/08 17:26	II080724-3	1	U	1.059	mg/L	105.9	85	115			
L70485-08ASD	ASD	07/25/08 17:29	II080724-3	1	U	1.022	mg/L	102.2	85	115	3.56	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.05155	mg/L	103.1	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.04883	mg/L	97.7	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05	U	.05218	mg/L	104.4	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05	U	.05217	mg/L	104.3	70	130	0.02	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	100		100.42	mg/L	100.4	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.6	0.6			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	49.96908		53.29	mg/L	106.6	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	49.96908	9.1	61.84	mg/L	105.5	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	49.96908	9.1	62.62	mg/L	107.1	85	115	1.25	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	2		2.0637	mg/L	103.2	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.015	0.015			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	.5		.5374	mg/L	107.5	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	.5	U	.5263	mg/L	105.3	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	.5	U	.5324	mg/L	106.5	85	115	1.15	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248205													
WG248205ICV	ICV	07/16/08 19:00	II080624-3	.00501		.00519	mg/L	103.6	95	105			
WG248205ICB	ICB	07/16/08 19:02				U	mg/L		-0.0002	0.0002			
WG248205LRB	LRB	07/16/08 19:06				U	mg/L		-0.00044	0.00044			
WG248205LFB	LFB	07/16/08 19:09	II080711-8	.002		.00203	mg/L	101.5	85	115			
L70472-01LFM	LFM	07/16/08 19:47	II080711-8	.002	U	.002	mg/L	100	85	115			
L70472-01LFMD	LFMD	07/16/08 19:49	II080711-8	.002	U	.00193	mg/L	96.5	85	115	3.56	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: OJ06DZ

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	II080717-3	2		2.001	mg/L	100.1	95	105			
WG248802ICB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	II080724-3	.5		.56	mg/L	112	85	115			
L70485-08AS	AS	07/25/08 17:26	II080724-3	.5	U	.532	mg/L	106.4	85	115			
L70485-08ASD	ASD	07/25/08 17:29	II080724-3	.5	U	.517	mg/L	103.4	85	115	2.86	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	II080717-3	2		1.943	mg/L	97.2	95	105			
WG248802ICB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	II080724-3	.5		.537	mg/L	107.4	85	115			
L70485-08AS	AS	07/25/08 17:26	II080724-3	.5	.01	.561	mg/L	110.2	85	115			
L70485-08ASD	ASD	07/25/08 17:29	II080724-3	.5	.01	.536	mg/L	105.2	85	115	4.56	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248688													
WG248688ICV	ICV	07/23/08 21:29	WI080613-1	2.416		2.404	mg/L	99.5	90	110			
WG248688ICB	ICB	07/23/08 21:30				U	mg/L		-0.06	0.06			
WG248688LFB1	LFB	07/23/08 21:32	WI080312-1	2		1.994	mg/L	99.7	90	110			
L70487-01AS	AS	07/23/08 21:34	WI080312-1	2	1.08	3.172	mg/L	104.6	90	110			
L70487-02DUP	DUP	07/23/08 21:37			1.08	1.077	mg/L				0.3	20	
WG248688LFB2	LFB	07/23/08 22:10	WI080312-1	2		1.992	mg/L	99.6	90	110			

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454LCSW3	LCSW	07/21/08 14:41	PCN29627	6		6.57	units	109.5	90	110			
L70504-07DUP	DUP	07/21/08 16:10			7.8	7.82	units				0.3	20	
WG248454LCSW6	LCSW	07/21/08 17:47	PCN29627	6		6.57	units	109.5	90	110			
WG248454LCSW9	LCSW	07/21/08 20:59	PCN29627	6		6.56	units	109.3	90	110			
WG248454LCSW12	LCSW	07/22/08 0:30	PCN29627	6		6.46	units	107.7	90	110			
WG248454LCSW15	LCSW	07/22/08 3:43	PCN29627	6		6.45	units	107.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	20		20.89	mg/L	104.5	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.9	0.9			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	99.76186		110.6	mg/L	110.9	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	99.76186	.5	113.63	mg/L	113.4	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	99.76186	.5	114.37	mg/L	114.1	85	115	0.65	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: OJ06DZ

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248201													
WG248201PBW	PBW	07/16/08 13:10				U	mg/L		-20	20			
WG248201LCSW	LCSW	07/16/08 13:11	PCN30198	260		254	mg/L	97.7	80	120			
L70487-02DUP	DUP	07/16/08 13:39			900	896	mg/L				0.4	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.05277	mg/L	105.5	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.05261	mg/L	105.2	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05	.0038	.06198	mg/L	116.4	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05	.0038	.06209	mg/L	116.6	70	130	0.18	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	100		102.8	mg/L	102.8	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.9	0.9			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	98.21624		107.38	mg/L	109.3	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	98.21624	9	115.3	mg/L	108.2	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	98.21624	9	116.13	mg/L	109.1	85	115	0.72	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248250													
WG248250PBW	PBW	07/17/08 9:25				U	mg/L		-30	30			
WG248250LCSW	LCSW	07/17/08 9:28	WC080514-1	100		100	mg/L	100	80	120			
L70497-01DUP	DUP	07/17/08 10:43			1190	1183	mg/L				0.6	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.0545	mg/L	109	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.0501		.04927	mg/L	98.3	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.0501	U	.05222	mg/L	104.2	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.0501	U	.05198	mg/L	103.8	70	130	0.46	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.05297	mg/L	105.9	90	110			
WG248594ICB	ICB	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.05146	mg/L	102.9	85	115			
L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05	.0038	.06173	mg/L	115.9	70	130			
L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05	.0038	.06136	mg/L	115.1	70	130	0.6	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

Project ID: OJ06DZ

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	II080717-3	2		1.995	mg/L	99.8	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L		-0.03	0.03			
WG248737LFB	LFB	07/24/08 22:48	II080708-3	.5		.528	mg/L	105.6	85	115			
L70485-06AS	AS	07/24/08 23:47	II080708-3	.5	U	.526	mg/L	105.2	85	115			
L70485-06ASD	ASD	07/24/08 23:51	II080708-3	.5	U	.533	mg/L	106.6	85	115	1.32	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70487-01	WG248487	Chloride	SM4500CI-E	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.
	WG248577	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).
	WG248272	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).
	WG248454	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L70487-02	WG248487	Chloride	SM4500CI-E	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.
	WG248577	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).
	WG248272	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).
	WG248454	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70487**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70487
Date Received: 7/15/2008
Received By:
Date Printed: 7/15/2008

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)
NA6457	5.9	14

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

Notes

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70487
Date Received: 7/15/2008
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
L70487-01	PZ-7		Y		Y							<input type="checkbox"/>
L70487-02	DUP071108A		Y		Y							<input type="checkbox"/>

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: _____

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

August 01, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70527- SULFATE ONLY

Bill Dorris:

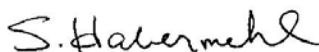
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 17, 2008. This project was assigned to ACZ's project number, L70527. Please reference this number in all future inquiries.

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 L70527. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-15

ACZ Sample ID: **L70527-01**

Date Sampled: 07/15/08 13:55

Date Received: 07/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730			mg/L	10	50	07/17/08 17:33	kah

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-16

ACZ Sample ID: **L70527-02**

Date Sampled: 07/15/08 13:40

Date Received: 07/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1840			mg/L	10	50	07/21/08 9:26	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-17

ACZ Sample ID: **L70527-03**

Date Sampled: 07/15/08 13:30

Date Received: 07/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1770			mg/L	10	50	07/21/08 9:30	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-18

ACZ Sample ID: **L70527-04**

Date Sampled: 07/15/08 13:15

Date Received: 07/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1710			mg/L	10	50	07/17/08 17:48	kah

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-19

ACZ Sample ID: **L70527-05**

Date Sampled: 07/15/08 12:33

Date Received: 07/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1670			mg/L	20	100	07/21/08 9:33	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-20

ACZ Sample ID: **L70527-06**

Date Sampled: 07/15/08 12:25

Date Received: 07/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1640			mg/L	10	50	07/21/08 9:37	gkj

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: OJ06DZ

Alkalinity as CaCO₃ SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454PBW2	PBW	07/21/08 17:31				U	mg/L		-20	20			
WG248454LCSW5	LCSW	07/21/08 17:44	WC080702-8	820		789.7	mg/L	96.3	90	110			
L70527-04DUP	DUP	07/21/08 20:37			129	129.7	mg/L				0.5	20	
WG248454PBW3	PBW	07/21/08 20:42				U	mg/L		-20	20			
WG248454LCSW8	LCSW	07/21/08 20:55	WC080702-8	820		789.2	mg/L	96.2	90	110			
L70551-02DUP	DUP	07/21/08 22:29			20	20.7	mg/L				3.4	20	
WG248454PBW4	PBW	07/22/08 0:15				U	mg/L		-20	20			
WG248454LCSW11	LCSW	07/22/08 0:27	WC080702-8	820		796.8	mg/L	97.2	90	110			
WG248454LCSW14	LCSW	07/22/08 3:39	WC080702-8	820		798.5	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
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		2.022	mg/L	101.1	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.09	0.09			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	1		1.149	mg/L	114.9	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	1	.21	1.311	mg/L	110.1	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	1	.21	1.279	mg/L	106.9	85	115	2.47	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.02006		.02117	mg/L	105.5	90	110			
WG248596ICB	ICB	07/25/08 21:02				.00056	mg/L		-0.0012	0.0012			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.01		.01054	mg/L	105.4	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.02	U	.02522	mg/L	126.1	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.02	U	.02522	mg/L	126.1	70	130	0	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.053	mg/L	106	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0015	0.0015			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.05		.05365	mg/L	107.3	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1	.003	.1144	mg/L	111.4	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1	.003	.1136	mg/L	110.6	70	130	0.7	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.9875	mg/L	99.4	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.009	0.009			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.5119	mg/L	102.4	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	.038	.5672	mg/L	105.8	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	.038	.5754	mg/L	107.5	85	115	1.44	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: **OJ06DZ**

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.04979	mg/L	99.6	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0003	0.0003			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.05005		.0488	mg/L	97.5	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1001	U	.09614	mg/L	96	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1001	U	.0949	mg/L	94.8	70	130	1.3	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.05092	mg/L	101.8	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0003	0.0003			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.05		.05204	mg/L	104.1	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1	U	.09868	mg/L	98.7	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1	U	.09748	mg/L	97.5	70	130	1.22	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	100		99.47	mg/L	99.5	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.6	0.6			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	67.97008		77.72	mg/L	114.3	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	67.97008	248	315.46	mg/L	99.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	67.97008	248	315.47	mg/L	99.3	85	115	0	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248493													
WG248493ICB	ICB	07/21/08 11:30				U	mg/L		-3	3			
WG248493ICV	ICV	07/21/08 11:30	WI071212-1	54.945		57.2	mg/L	104.1	90	110			
WG248493LFB1	LFB	07/21/08 16:00	WI080620-3	30		31.3	mg/L	104.3	90	110			
WG248493LFB2	LFB	07/21/08 16:03	WI080620-3	30		30.7	mg/L	102.3	90	110			
L70527-01AS	AS	07/21/08 16:09	10XCL	30	120	155	mg/L	116.7	90	110			M3
L70527-02DUP	DUP	07/21/08 16:09			140	141	mg/L				0.7	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.973	mg/L	98.7	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.534	mg/L	106.8	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	U	.552	mg/L	110.4	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	U	.559	mg/L	111.8	85	115	1.26	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: OJ06DZ

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.901	mg/L	95.1	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.534	mg/L	106.8	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	U	.542	mg/L	108.4	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	U	.543	mg/L	108.6	85	115	0.18	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454LCSW1	LCSW	07/21/08 14:27	PCN29501	1408.8		1459	µmhos/cm	103.6	90	110			
WG248454LCSW4	LCSW	07/21/08 17:33	PCN29501	1408.8		1456	µmhos/cm	103.4	90	110			
L70527-04DUP	DUP	07/21/08 20:37			3170	3190	µmhos/cm				0.6	20	
WG248454LCSW7	LCSW	07/21/08 20:44	PCN29501	1408.8		1455	µmhos/cm	103.3	90	110			
L70551-02DUP	DUP	07/21/08 22:29			3910	3890	µmhos/cm				0.5	20	
WG248454LCSW10	LCSW	07/22/08 0:16	PCN29501	1408.8		1455	µmhos/cm	103.3	90	110			
WG248454LCSW13	LCSW	07/22/08 3:29	PCN29501	1408.8		1453	µmhos/cm	103.1	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.922	mg/L	96.1	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.522	mg/L	104.4	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	.01	.55	mg/L	108	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	.01	.555	mg/L	109	85	115	0.9	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248577													
WG248577ICV	ICV	07/22/08 15:17	WI080711-5	.3		.2818	mg/L	93.9	90	110			
WG248577ICB	ICB	07/22/08 15:17				U	mg/L		-0.015	0.015			
WG248457LRB	LRB	07/22/08 15:36				U	mg/L		-0.015	0.015			
WG248457LFB	LFB	07/22/08 15:36	WI080711-2	.2		.1996	mg/L	99.8	90	110			
L70487-01DUP	DUP	07/22/08 15:41			U	U	mg/L				0	20	RA
L70487-02LFM	LFM	07/22/08 15:41	WI080711-2	.2	U	.185	mg/L	92.5	90	110			
WG248768													
WG248768ICV	ICV	07/24/08 21:25	WI080711-5	.3		.2796	mg/L	93.2	90	110			
WG248768ICB	ICB	07/24/08 21:26				U	mg/L		-0.015	0.015			
WG248769													
WG248769ICV	ICV	07/24/08 21:53	WI080711-5	.3		.2706	mg/L	90.2	90	110			
WG248769ICB	ICB	07/24/08 21:54				U	mg/L		-0.015	0.015			
WG248644LRB	LRB	07/24/08 21:54				U	mg/L		-0.015	0.015			
WG248644LFB	LFB	07/24/08 21:55	WI080711-2	.2		.1946	mg/L	97.3	90	110			
L70527-03DUP	DUP	07/24/08 21:58			.007	.0072	mg/L				2.8	20	RA
L70527-04LFM	LFM	07/24/08 22:00	WI080711-2	.2	.014	.2162	mg/L	101.1	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: **OJ06DZ**

Fluoride			SM4500F-C										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248699													
WG248699ICV	ICV	07/24/08 10:49	WC080714-1	2		1.89	mg/L	94.5	90	110			
WG248699ICB	ICB	07/24/08 10:55				U	mg/L		-0.3	0.3			
WG248699LFB1	LFB	07/24/08 11:00	WC080716-3	5		5.07	mg/L	101.4	90	110			
WG248699LFB2	LFB	07/24/08 13:05	WC080716-3	5		4.91	mg/L	98.2	90	110			
L70527-05AS	AS	07/24/08 13:10	WC080716-3	5	.2	5.22	mg/L	100.4	90	110			
L70527-05DUP	DUP	07/24/08 13:13			.2	.16	mg/L				22.2	20	RA
WG248775													
WG248775ICV	ICV	07/25/08 10:36	WC080714-1	2		1.85	mg/L	92.5	90	110			
WG248775ICB	ICB	07/25/08 10:43				U	mg/L		-0.3	0.3			
WG248775LFB	LFB	07/25/08 10:52	WC080716-3	5		4.75	mg/L	95	90	110			
WG248775LFB2	LFB	07/25/08 12:47	WC080716-3	5		4.64	mg/L	92.8	90	110			
L70527-01AS	AS	07/25/08 12:52	WC080716-3	5	.2	4.98	mg/L	95.6	90	110			
L70527-01DUP	DUP	07/25/08 12:59			.2	.19	mg/L				5.1	20	RA
Iron, dissolved			M200.7 ICP										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.931	mg/L	96.6	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.06	0.06			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	1		1.079	mg/L	107.9	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	1	.05	1.146	mg/L	109.6	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	1	.05	1.155	mg/L	110.5	85	115	0.78	20	
Lead, dissolved			M200.8 ICP-MS										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.05	mg/L	100	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0003	0.0003			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.05		.04911	mg/L	98.2	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1	.0017	.1032	mg/L	101.5	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1	.0017	.1023	mg/L	100.6	70	130	0.88	20	
Magnesium, dissolved			M200.7 ICP										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	100		98.73	mg/L	98.7	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.6	0.6			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	49.96908		54.86	mg/L	109.8	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	49.96908	34.3	89.93	mg/L	111.3	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	49.96908	34.3	90.2	mg/L	111.9	85	115	0.3	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: OJ06DZ

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		2.0367	mg/L	101.8	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.015	0.015			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.5569	mg/L	111.4	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	U	.576	mg/L	115.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	U	.581	mg/L	116.2	85	115	0.86	20	MA

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248382													
WG248382ICV	ICV	07/18/08 19:20	II080624-3	.00501		.00522	mg/L	104.2	90	110			
WG248382ICB	ICB	07/18/08 19:23				U	mg/L		-0.0006	0.0006			
WG248392													
WG248392LRB	LRB	07/18/08 22:30				U	mg/L		-0.00044	0.00044			
WG248392LFB	LFB	07/18/08 22:32	II080711-8	.002		.002	mg/L	100	85	115			
L70469-01LFM	LFM	07/18/08 22:37	II080711-8	.002	U	.00197	mg/L	98.5	85	115			
L70469-01LFMD	LFMD	07/18/08 22:39	II080711-8	.002	U	.00191	mg/L	95.5	85	115	3.09	20	
L70527-04LFM	LFM	07/18/08 23:09	II080711-8	.002	U	.00198	mg/L	99	85	115			
L70527-04LFMD	LFMD	07/18/08 23:11	II080711-8	.002	U	.00201	mg/L	100.5	85	115	1.5	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.947	mg/L	97.4	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.534	mg/L	106.8	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	U	.556	mg/L	111.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	U	.558	mg/L	111.6	85	115	0.36	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.948	mg/L	97.4	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.566	mg/L	113.2	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	.05	.616	mg/L	113.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	.05	.614	mg/L	112.8	85	115	0.33	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
WG248688													
WG248688ICV	ICV	07/23/08 21:29	WI080613-1	2.416		2.404	mg/L	99.5	90	110			
WG248688ICB	ICB	07/23/08 21:30				U	mg/L		-0.06	0.06			
WG248688LFB1	LFB	07/23/08 21:32	WI080312-1	2		1.994	mg/L	99.7	90	110			
L70487-01AS	AS	07/23/08 21:34	WI080312-1	2	1.08	3.172	mg/L	104.6	90	110			
L70487-02DUP	DUP	07/23/08 21:37			1.08	1.077	mg/L				0.3	20	
WG248688LFB2	LFB	07/23/08 22:10	WI080312-1	2		1.992	mg/L	99.6	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: **OJ06DZ**

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454LCSW3	LCSW	07/21/08 14:41	PCN29627	6		6.57	units	109.5	90	110			
WG248454LCSW6	LCSW	07/21/08 17:47	PCN29627	6		6.57	units	109.5	90	110			
L70527-04DUP	DUP	07/21/08 20:37			8.2	8.23	units				0.4	20	
WG248454LCSW9	LCSW	07/21/08 20:59	PCN29627	6		6.56	units	109.3	90	110			
L70551-02DUP	DUP	07/21/08 22:29			9.4	9.36	units				0.4	20	
WG248454LCSW12	LCSW	07/22/08 0:30	PCN29627	6		6.46	units	107.7	90	110			
WG248454LCSW15	LCSW	07/22/08 3:43	PCN29627	6		6.45	units	107.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248977													
WG248977ICV	ICV	07/30/08 11:48	II080717-3	20		20.24	mg/L	101.2	95	105			
WG248977ICB	ICB	07/30/08 11:51				U	mg/L		-0.9	0.9			
WG248977LFB	LFB	07/30/08 12:04	II080724-3	99.76186		100.46	mg/L	100.7	85	115			
L70525-01AS	AS	07/30/08 12:11	II080724-3	99.76186	4.4	111.48	mg/L	107.3	85	115			
L70525-01ASD	ASD	07/30/08 12:14	II080724-3	99.76186	4.4	111.84	mg/L	107.7	85	115	0.32	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248330													
WG248330PBW	PBW	07/18/08 9:20				U	mg/L		-20	20			
WG248330LCSW	LCSW	07/18/08 9:23	PCN30198	260		278	mg/L	106.9	80	120			
L70527-05DUP	DUP	07/18/08 10:40			2880	2896	mg/L				0.6	20	
WG248492													
WG248492PBW	PBW	07/21/08 16:12				U	mg/L		-20	20			
WG248492LCSW	LCSW	07/21/08 16:12	PCN30199	260		274	mg/L	105.4	80	120			
L70551-06DUP	DUP	07/21/08 16:22			4070	4066	mg/L				0.1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.0517	mg/L	103.4	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0003	0.0003			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.05		.05207	mg/L	104.1	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1	.0017	.109	mg/L	107.3	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1	.0017	.10718	mg/L	105.5	70	130	1.68	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	100		98.61	mg/L	98.6	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.9	0.9			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	98.21624		107.62	mg/L	109.6	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	98.21624	38.6	147.74	mg/L	111.1	85	115			
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	98.21624	38.6	148.55	mg/L	111.9	85	115	0.55	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

Project ID: OJ06DZ

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248318													
WG248318PBW	PBW	07/17/08 16:00				U	mg/L		-30	30			
WG248318LCSW	LCSW	07/17/08 16:04	WC080514-1	100		96	mg/L	96	80	120			
L70527-04DUP	DUP	07/17/08 17:53			1710	1745	mg/L				2	20	
WG248444													
WG248444PBW	PBW	07/21/08 9:20				U	mg/L		-30	30			
WG248444LCSW	LCSW	07/21/08 9:23	WC080514-1	100		87	mg/L	87	80	120			
L70554-03DUP	DUP	07/21/08 10:01			2870	2852	mg/L				0.6	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.05045	mg/L	100.9	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0003	0.0003			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.0501		.04847	mg/L	96.7	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1002	U	.10208	mg/L	101.9	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1002	U	.10122	mg/L	101	70	130	0.85	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/08 20:56	MS080722-4	.05		.05251	mg/L	105	90	110			
WG248596ICB	ICB	07/25/08 21:02				U	mg/L		-0.0003	0.0003			
WG248596LFB	LFB	07/25/08 21:14	MS080714-1	.05		.0519	mg/L	103.8	85	115			
L70527-01AS	AS	07/25/08 22:46	MS080714-1	.1	.0276	.1425	mg/L	114.9	70	130			
L70527-01ASD	ASD	07/25/08 22:52	MS080714-1	.1	.0276	.1407	mg/L	113.1	70	130	1.27	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	II080717-3	2		1.953	mg/L	97.7	95	105			
WG248816ICB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	II080724-3	.5		.561	mg/L	112.2	85	115			
L70525-01AS	AS	07/26/08 18:04	II080724-3	.5	.09	.676	mg/L	117.2	85	115			M1
L70525-01ASD	ASD	07/26/08 18:08	II080724-3	.5	.09	.68	mg/L	118	85	115	0.59	20	M1

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70527-01	WG248816	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.
		Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	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.
	WG248577	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).
	WG248775	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).
L70527-02	WG248816	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.
		Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	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.
	WG248577	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).
	WG248775	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).
L70527-03	WG248816	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.
		Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	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.
	WG248769	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).
	WG248775	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).
L70527-04	WG248816	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.
		Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	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.
	WG248769	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).
	WG248775	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70527-05	WG248816	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.
		Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500Cl-E	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.
	WG248769	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).
	WG248699	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).
L70527-06	WG248816	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.
		Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500Cl-E	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.
	WG248769	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).
	WG248699	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70527**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70527
Date Received: 7/17/2008
Received By:
Date Printed: 7/17/2008

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)
574	4.7	14

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

Notes

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70527
 Date Received: 7/17/2008
 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
L70527-01	IW-15		Y		Y							<input type="checkbox"/>
L70527-02	IW-16		Y		Y							<input type="checkbox"/>
L70527-03	IW-17		Y		Y							<input type="checkbox"/>
L70527-04	IW-18		Y		Y							<input type="checkbox"/>
L70527-05	IW-19		Y		Y							<input type="checkbox"/>
L70527-06	IW-20		Y		Y							<input type="checkbox"/>

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: _____

L70527

ACZ**Laboratories, Inc.**

L70524

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493 WQL 7/16/08

Report to:

Name: Billy Dorris
 Company: Freeport McMoran Sierrita
 E-mail: billy-dorris@fmi.com

Address: 6200 W. Duval Mine Rd
Green Valley, AZ 85614
 Telephone: 520-648-8873

Copy of Report to:

Name: Dan Simpson
 Company: Hydro Geo Chem

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.

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

Quote #:

Project/PO #: 0506 DZ

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material?

SAMPLE IDENTIFICATION		DATE:TIME	Matrix	# of Containers	ANALYSES REQUESTED														
IW-15		7-15-08/13:55	GW	5	X														
IW-16		7-15-08/13:40	GW	5	X														
IW-17		7-15-08/13:30	GW	5	X														
IW-18		7-15-08/13:15	GW	5	X														
IW-19		7-15-08/12:33	GW	5	X														
IW-20		7-15-08/12:25	GW	5	X														

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

REMARKS/ SAMPLE DISCLOSURES

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

PAGE

of

UPS TRACKING #12 867 7E4 23 1000 5476

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

RELINQUISHED BY:**DATE:TIME****RECEIVED BY:****DATE:TIME**

Billy F. Dorris 7-16-08/15:00 WPL 7-17-08 10:47

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

August 04, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70581– SULFATE ONLY

Bill Dorris:

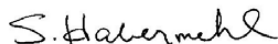
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 18, 2008. This project was assigned to ACZ's project number, L70581. Please reference this number in all future inquiries.

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 L70581. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-14

ACZ Sample ID: **L70581-01**

Date Sampled: 07/16/08 14:05

Date Received: 07/18/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1870			mg/L	10	50	07/22/08 12:48	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-13A

ACZ Sample ID: **L70581-02**

Date Sampled: 07/16/08 08:06

Date Received: 07/18/08

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	07/22/08 12:53	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-13B

ACZ Sample ID: **L70581-03**

Date Sampled: 07/16/08 13:24

Date Received: 07/18/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1110			mg/L	10	50	07/22/08 12:58	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-13C

ACZ Sample ID: **L70581-04**

Date Sampled: 07/16/08 12:20

Date Received: 07/18/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	70			mg/L	10	50	07/22/08 13:03	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: DUP071608A

ACZ Sample ID: **L70581-05**

Date Sampled: 07/16/08 00:00

Date Received: 07/18/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1710			mg/L	10	50	07/22/08 13:09	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-6A

ACZ Sample ID: **L70581-06**

Date Sampled: 07/17/08 10:50

Date Received: 07/18/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1850			mg/L	10	50	07/22/08 13:14	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-12

ACZ Sample ID: **L70581-07**

Date Sampled: 07/17/08 10:40

Date Received: 07/18/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1630			mg/L	10	50	07/22/08 13:19	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-13

ACZ Sample ID: **L70581-08**

Date Sampled: 07/17/08 10:30

Date Received: 07/18/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1850			mg/L	10	50	07/22/08 13:24	tbd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454PBW2	PBW	07/21/08 17:31				U	mg/L		-20	20			
WG248454LCSW5	LCSW	07/21/08 17:44	WC080702-8	820		789.7	mg/L	96.3	90	110			
WG248454PBW3	PBW	07/21/08 20:42				U	mg/L		-20	20			
WG248454LCSW8	LCSW	07/21/08 20:55	WC080702-8	820		789.2	mg/L	96.2	90	110			
WG248454PBW4	PBW	07/22/08 0:15				U	mg/L		-20	20			
WG248454LCSW11	LCSW	07/22/08 0:27	WC080702-8	820		796.8	mg/L	97.2	90	110			
L70581-08DUP	DUP	07/22/08 3:27			113	113	mg/L				0	20	
WG248454LCSW14	LCSW	07/22/08 3:39	WC080702-8	820		798.5	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
WG248844													
WG248844ICV	ICV	07/26/08 10:45	II080717-3	2		2.072	mg/L	103.6	95	105			
WG248844ICB	ICB	07/26/08 10:49				U	mg/L		-0.09	0.09			
WG248844LFB	LFB	07/26/08 11:02	II080724-3	1		1.092	mg/L	109.2	85	115			
L70446-02AS	AS	07/26/08 11:12	II080724-3	1	U	1.083	mg/L	108.3	85	115			
L70446-02ASD	ASD	07/26/08 11:15	II080724-3	1	U	1.106	mg/L	110.6	85	115	2.1	20	
L70572-04AS	AS	07/26/08 11:35	II080724-3	1	U	1.085	mg/L	108.5	85	115			
L70572-04ASD	ASD	07/26/08 11:38	II080724-3	1	U	1.118	mg/L	111.8	85	115	3	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248677													
WG248677ICV	ICV	07/26/08 6:37	MS080722-4	.02006		.02074	mg/L	103.4	90	110			
WG248677ICB	ICB	07/26/08 6:43				U	mg/L		-0.0012	0.0012			
WG248677LFB	LFB	07/26/08 6:55	MS080714-1	.01		.01	mg/L	100	85	115			
L70541-01AS	AS	07/26/08 7:06	MS080714-1	.01	.0014	.01092	mg/L	95.2	70	130			
L70541-01ASD	ASD	07/26/08 7:12	MS080714-1	.01	.0014	.01079	mg/L	93.9	70	130	1.2	20	

WG248923

WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.02006		.02051	mg/L	102.2	90	110			
WG248923ICB	ICB	07/30/08 5:48				U	mg/L		-0.0012	0.0012			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.01		.00951	mg/L	95.1	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.01	.0013	.01097	mg/L	96.7	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.01	.0013	.01102	mg/L	97.2	70	130	0.45	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248923													
WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.05		.04994	mg/L	99.9	90	110			
WG248923ICB	ICB	07/30/08 5:48				.00081	mg/L		-0.0015	0.0015			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.05		.04901	mg/L	98	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.05	.0061	.05479	mg/L	97.4	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.05	.0061	.05493	mg/L	97.7	70	130	0.26	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		2.0726	mg/L	103.6	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.009	0.009			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.5031	mg/L	100.6	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	.087	.6124	mg/L	105.1	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	.087	.6215	mg/L	106.9	85	115	1.47	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248677													
WG248677ICV	ICV	07/26/08 6:37	MS080722-4	.05		.05132	mg/L	102.6	90	110			
WG248677ICB	ICB	07/26/08 6:43				U	mg/L		-0.0003	0.0003			
WG248677LFB	LFB	07/26/08 6:55	MS080714-1	.05005		.06841	mg/L	136.7	85	115			LA
L70541-01AS	AS	07/26/08 7:06	MS080714-1	.05005	U	.04887	mg/L	97.6	70	130			
L70541-01ASD	ASD	07/26/08 7:12	MS080714-1	.05005	U	.04926	mg/L	98.4	70	130	0.79	20	

WG248923

WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.05		.04785	mg/L	95.7	90	110			
WG248923ICB	ICB	07/30/08 5:48				.00011	mg/L		-0.0003	0.0003			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.05005		.04661	mg/L	93.1	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.05005	U	.05019	mg/L	100.3	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.05005	U	.05042	mg/L	100.7	70	130	0.46	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248677													
WG248677ICV	ICV	07/26/08 6:37	MS080722-4	.05		.05138	mg/L	102.8	90	110			
WG248677ICB	ICB	07/26/08 6:43				U	mg/L		-0.0003	0.0003			
WG248677LFB	LFB	07/26/08 6:55	MS080714-1	.05		.06864	mg/L	137.3	85	115			LA
L70541-01AS	AS	07/26/08 7:06	MS080714-1	.05	U	.04843	mg/L	96.9	70	130			
L70541-01ASD	ASD	07/26/08 7:12	MS080714-1	.05	U	.04899	mg/L	98	70	130	1.15	20	

WG248923

WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.05		.0498	mg/L	99.6	90	110			
WG248923ICB	ICB	07/30/08 5:48				U	mg/L		-0.0003	0.0003			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.05		.04899	mg/L	98	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.05	.0001	.04891	mg/L	97.6	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.05	.0001	.04908	mg/L	98	70	130	0.35	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	100		98.14	mg/L	98.1	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.6	0.6			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	67.97008		70.88	mg/L	104.3	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	67.97008	93.6	163.98	mg/L	103.5	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	67.97008	93.6	163.22	mg/L	102.4	85	115	0.46	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: **OJ06DZ**

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248493													
WG248493ICB	ICB	07/21/08 11:30				U	mg/L		-3	3			
WG248493ICV	ICV	07/21/08 11:30	WI071212-1	54.945		57.2	mg/L	104.1	90	110			
WG248493LFB1	LFB	07/21/08 16:00	WI080620-3	30		31.3	mg/L	104.3	90	110			
WG248493LFB2	LFB	07/21/08 16:03	WI080620-3	30		30.7	mg/L	102.3	90	110			
L70565-06AS	AS	07/21/08 16:10	WI080620-3	30	30	59.7	mg/L	99	90	110			
L70565-07DUP	DUP	07/21/08 16:11			21	21	mg/L				0	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.977	mg/L	98.9	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.499	mg/L	99.8	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.515	mg/L	103	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.528	mg/L	105.6	85	115	2.49	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.934	mg/L	96.7	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.499	mg/L	99.8	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.509	mg/L	101.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.52	mg/L	104	85	115	2.14	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454LCSW1	LCSW	07/21/08 14:27	PCN29501	1408.8		1459	µmhos/cm	103.6	90	110			
WG248454LCSW4	LCSW	07/21/08 17:33	PCN29501	1408.8		1456	µmhos/cm	103.4	90	110			
WG248454LCSW7	LCSW	07/21/08 20:44	PCN29501	1408.8		1455	µmhos/cm	103.3	90	110			
WG248454LCSW10	LCSW	07/22/08 0:16	PCN29501	1408.8		1455	µmhos/cm	103.3	90	110			
L70581-08DUP	DUP	07/22/08 3:27			3410	3390	µmhos/cm				0.6	20	
WG248454LCSW13	LCSW	07/22/08 3:29	PCN29501	1408.8		1453	µmhos/cm	103.1	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.994	mg/L	99.7	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.503	mg/L	100.6	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.53	mg/L	106	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.541	mg/L	108.2	85	115	2.05	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248768													
WG248768ICV	ICV	07/24/08 21:25	WI080711-5	.3		.2796	mg/L	93.2	90	110			
WG248768ICB	ICB	07/24/08 21:26				U	mg/L		-0.015	0.015			
WG248769													
WG248769ICV	ICV	07/24/08 21:53	WI080711-5	.3		.2706	mg/L	90.2	90	110			
WG248769ICB	ICB	07/24/08 21:54				U	mg/L		-0.015	0.015			
WG248644LRB	LRB	07/24/08 21:54				U	mg/L		-0.015	0.015			
WG248644LFB	LFB	07/24/08 21:55	WI080711-2	.2		.1946	mg/L	97.3	90	110			
L70581-07DUP	DUP	07/24/08 22:18			.01	.0104	mg/L				3.9	20	RA
L70581-08LFB	LFB	07/24/08 22:19	WI080711-2	.2	.047	.2458	mg/L	99.4	90	110			

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248699													
WG248699ICV	ICV	07/24/08 10:49	WC080714-1	2		1.89	mg/L	94.5	90	110			
WG248699ICB	ICB	07/24/08 10:55				U	mg/L		-0.3	0.3			
WG248699LFB1	LFB	07/24/08 11:00	WC080716-3	5		5.07	mg/L	101.4	90	110			
WG248699LFB2	LFB	07/24/08 13:05	WC080716-3	5		4.91	mg/L	98.2	90	110			
L70572-05AS	AS	07/24/08 14:04	WC080724-2	10	1.9	10.05	mg/L	81.5	90	110			M2
L70572-05DUP	DUP	07/24/08 14:11			1.9	1.85	mg/L				2.7	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.987	mg/L	99.4	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.06	0.06			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	1		1.028	mg/L	102.8	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	1	U	1.083	mg/L	108.3	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	1	U	1.099	mg/L	109.9	85	115	1.47	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248923													
WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.05		.04901	mg/L	98	90	110			
WG248923ICB	ICB	07/30/08 5:48				.00016	mg/L		-0.0003	0.0003			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.05		.04575	mg/L	91.5	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.05	.0002	.04777	mg/L	95.1	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.05	.0002	.04795	mg/L	95.5	70	130	0.38	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	100		99.74	mg/L	99.7	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.6	0.6			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	49.96908		52.2	mg/L	104.5	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	49.96908	19.7	76.52	mg/L	113.7	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	49.96908	19.7	75.61	mg/L	111.9	85	115	1.2	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.9842	mg/L	99.2	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.015	0.015			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.5304	mg/L	106.1	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.554	mg/L	110.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.5648	mg/L	113	85	115	1.93	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248382													
WG248382ICV	ICV	07/18/08 19:20	II080624-3	.00501		.00522	mg/L	104.2	90	110			
WG248382ICB	ICB	07/18/08 19:23				U	mg/L		-0.0006	0.0006			
WG248392													
WG248392LRB	LRB	07/18/08 22:30				U	mg/L		-0.00044	0.00044			
WG248392LFB	LFB	07/18/08 22:32	II080711-8	.002		.002	mg/L	100	85	115			
L70527-04LFM	LFM	07/18/08 23:09	II080711-8	.002	U	.00198	mg/L	99	85	115			
L70527-04LFMD	LFMD	07/18/08 23:11	II080711-8	.002	U	.00201	mg/L	100.5	85	115	1.5	20	
WG248657													
WG248657ICV	ICV	07/23/08 20:19	II080624-3	.00501		.00517	mg/L	103.2	95	105			
WG248657ICB	ICB	07/23/08 20:21				U	mg/L		-0.0002	0.0002			
WG248658													
WG248658LRB	LRB	07/23/08 22:01				U	mg/L		-0.00044	0.00044			
WG248658LFB	LFB	07/23/08 22:03	II080711-8	.002		.00204	mg/L	102	85	115			
L70581-02LFM	LFM	07/23/08 22:09	II080711-8	.002	U	.00212	mg/L	106	85	115			
L70581-02LFMD	LFMD	07/23/08 22:11	II080711-8	.002	U	.00202	mg/L	101	85	115	4.83	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		2.018	mg/L	100.9	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.519	mg/L	103.8	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.532	mg/L	106.4	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.531	mg/L	106.2	85	115	0.19	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.914	mg/L	95.7	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.494	mg/L	98.8	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.504	mg/L	100.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.516	mg/L	103.2	85	115	2.35	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248688													
WG248688ICV	ICV	07/23/08 21:29	WI080613-1	2.416		2.404	mg/L	99.5	90	110			
WG248688ICB	ICB	07/23/08 21:30				U	mg/L		-0.06	0.06			
WG248688LFB1	LFB	07/23/08 21:32	WI080312-1	2		1.994	mg/L	99.7	90	110			
L70551-06AS	AS	07/23/08 21:53	WI080312-1	2	.42	2.669	mg/L	112.5	90	110			M1
L70554-02DUP	DUP	07/23/08 21:55			.85	.845	mg/L				0.6	20	
WG248688LFB2	LFB	07/23/08 22:10	WI080312-1	2		1.992	mg/L	99.6	90	110			
L70581-03AS	AS	07/23/08 22:13	WI080312-1	2	1.65	3.852	mg/L	110.1	90	110			
L70581-04DUP	DUP	07/23/08 22:15			.04	.041	mg/L				2.5	20	RA

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
WG248454LCSW3	LCSW	07/21/08 14:41	PCN29627	6		6.57	units	109.5	90	110			
WG248454LCSW6	LCSW	07/21/08 17:47	PCN29627	6		6.57	units	109.5	90	110			
WG248454LCSW9	LCSW	07/21/08 20:59	PCN29627	6		6.56	units	109.3	90	110			
WG248454LCSW12	LCSW	07/22/08 0:30	PCN29627	6		6.46	units	107.7	90	110			
L70581-08DUP	DUP	07/22/08 3:27			8.3	8.27	units				0.4	20	
WG248454LCSW15	LCSW	07/22/08 3:43	PCN29627	6		6.45	units	107.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	20		20.37	mg/L	101.9	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.9	0.9			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	99.76186		105.55	mg/L	105.8	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	99.76186	1.6	119.75	mg/L	118.4	85	115			M1
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	99.76186	1.6	117.11	mg/L	115.8	85	115	2.23	20	M1

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248538													
WG248538PBW	PBW	07/22/08 10:30				U	mg/L		-20	20			
WG248538LCSW	LCSW	07/22/08 10:31	PCN30199	260		266	mg/L	102.3	80	120			
L70581-02DUP	DUP	07/22/08 10:53			3030	3028	mg/L				0.1	20	
L70595-04DUP	DUP	07/22/08 11:14			160	158	mg/L				1.3	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249072													
WG249072ICV	ICV	07/30/08 19:45	MS080722-4	.05		.05139	mg/L	102.8	90	110			
WG249072ICB	ICB	07/30/08 19:51				.00013	mg/L		-0.0003	0.0003			
WG249072LFB	LFB	07/30/08 20:03	MS080714-1	.05		.04952	mg/L	99	85	115			
L70581-01AS	AS	07/30/08 20:14	MS080714-1	.1	.0012	.10804	mg/L	106.8	70	130			
L70581-01ASD	ASD	07/30/08 20:20	MS080714-1	.1	.0012	.11306	mg/L	111.9	70	130	4.54	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	100		101.59	mg/L	101.6	95	105			
WG248828ICV	ICV	07/26/08 1:34	II080717-3	100		99.7	mg/L	99.7	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.9	0.9			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-6	6			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	98.21624		102.7	mg/L	104.6	85	115			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	98.21624		103.8	mg/L	105.7	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	98.21624	16.3	130.9	mg/L	116.7	85	115			MA
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	98.21624	16.3	129.15	mg/L	114.9	85	115	1.35	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248552													
WG248552PBW	PBW	07/22/08 11:30				U	mg/L		-30	30			
WG248552LCSW	LCSW	07/22/08 11:35	WC080514-1	100		100	mg/L	100	80	120			
L70581-08DUP	DUP	07/22/08 13:29			1850	1855	mg/L				0.3	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248677													
WG248677ICV	ICV	07/26/08 6:37	MS080722-4	.05		.05177	mg/L	103.5	90	110			
WG248677ICB	ICB	07/26/08 6:43				U	mg/L		-0.0003	0.0003			
WG248677LFB	LFB	07/26/08 6:55	MS080714-1	.0501		.06628	mg/L	132.3	85	115			LA
L70541-01AS	AS	07/26/08 7:06	MS080714-1	.0501	U	.04706	mg/L	93.9	70	130			
L70541-01ASD	ASD	07/26/08 7:12	MS080714-1	.0501	U	.04769	mg/L	95.2	70	130	1.33	20	
WG248923													
WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.05		.05058	mg/L	101.2	90	110			
WG248923ICB	ICB	07/30/08 5:48				.00013	mg/L		-0.0003	0.0003			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.0501		.0461	mg/L	92	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.0501	U	.0486	mg/L	97	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.0501	U	.04872	mg/L	97.2	70	130	0.25	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248923													
WG248923ICV	ICV	07/30/08 5:42	MS080722-4	.05		.04806	mg/L	96.1	90	110			
WG248923ICB	ICB	07/30/08 5:48				U	mg/L		-0.0003	0.0003			
WG248923LFB	LFB	07/30/08 5:59	MS080714-1	.05		.04577	mg/L	91.5	85	115			
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.05	.0039	.05565	mg/L	103.5	70	130			
L70541-01ASD	ASD	07/30/08 6:16	MS080714-1	.05	.0039	.05591	mg/L	104	70	130	0.47	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

Project ID: OJ06DZ

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	II080717-3	2		1.962	mg/L	98.1	95	105			
WG248828ICB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	II080724-3	.5		.522	mg/L	104.4	85	115			
L70579-05AS	AS	07/26/08 2:51	II080724-3	.5	U	.569	mg/L	113.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	II080724-3	.5	U	.57	mg/L	114	85	115	0.18	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70581-01	WG248677	Beryllium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
		Cadmium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248677	Thallium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
	WG248769	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 ($< 10x MDL$).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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.
L70581-02	WG248677	Beryllium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
		Cadmium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248677	Thallium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
	WG248769	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 ($< 10x MDL$).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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.
L70581-03	WG248677	Beryllium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
		Cadmium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248677	Thallium, dissolved	M200.8 ICP-MS	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [$< MDL$].
	WG248769	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 ($< 10x MDL$).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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 ($< 10x MDL$).

FMI Gold & Copper - Sierrita

ACZ Project ID: L70581

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70581-04	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248769	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).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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).
L70581-05	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248769	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).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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).
L70581-06	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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).
L70581-07	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248769	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).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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).
L70581-08	WG248828	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, 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.
	WG248769	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).
	WG248699	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248688	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70581**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70581
 Date Received: 7/18/2008
 Received By:
 Date Printed: 7/18/2008

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)
2125	4.7	14

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

Notes

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70581
Date Received: 7/18/2008
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
L70581-01	IW-14		Y		Y							<input type="checkbox"/>
L70581-02	MH-13A		Y		Y							<input type="checkbox"/>
L70581-03	MH-13B		Y		Y							<input type="checkbox"/>
L70581-04	MH-13C		Y		Y							<input type="checkbox"/>
L70581-05	DUP071608A		Y		Y							<input type="checkbox"/>
L70581-06	IW-6A		Y		Y							<input type="checkbox"/>
L70581-07	IW-12		Y		Y							<input type="checkbox"/>
L70581-08	IW-13		Y		Y							<input type="checkbox"/>

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: _____

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

August 13, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70726- SULFATE ONLY

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 25, 2008. This project was assigned to ACZ's project number, L70726. 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 L70726. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-4

ACZ Sample ID: **L70726-01**

Date Sampled: 07/23/08 12:25

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1640			mg/L	10	50	07/31/08 11:49	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-5

ACZ Sample ID: **L70726-02**

Date Sampled: 07/23/08 12:48

Date Received: 07/25/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730			mg/L	10	50	07/31/08 11:53	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-8

ACZ Sample ID: **L70726-03**

Date Sampled: 07/23/08 12:05

Date Received: 07/25/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1870			mg/L	10	50	07/31/08 11:57	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-9

ACZ Sample ID: **L70726-04**

Date Sampled: 07/23/08 12:15

Date Received: 07/25/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730			mg/L	10	50	07/31/08 12:01	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-22

ACZ Sample ID: **L70726-05**

Date Sampled: 07/23/08 13:25

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1760			mg/L	10	50	07/31/08 12:05	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-23

ACZ Sample ID: **L70726-06**

Date Sampled: 07/23/08 13:05

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730			mg/L	10	50	07/30/08 10:14	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-24

ACZ Sample ID: **L70726-07**

Date Sampled: 07/23/08 12:40

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730			mg/L	10	50	07/30/08 10:16	gkj

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248934													
WG248934PBW1	PBW	07/28/08 17:10				15.1	mg/L		-20	20			
WG248934LCSW2	LCSW	07/28/08 17:22	WC080722-2	820		781.7	mg/L	95.3	90	110			
WG248934PBW2	PBW	07/28/08 20:26				U	mg/L		-20	20			
WG248934LCSW5	LCSW	07/28/08 20:39	WC080722-2	820		784.8	mg/L	95.7	90	110			
L70727-02DUP	DUP	07/28/08 22:14			414	410	mg/L				1	20	
WG248934PBW3	PBW	07/28/08 23:55				U	mg/L		-20	20			
WG248934LCSW8	LCSW	07/29/08 0:07	WC080722-2	820		784.2	mg/L	95.6	90	110			
WG248934PBW4	PBW	07/29/08 3:02				U	mg/L		-20	20			
WG248934LCSW11	LCSW	07/29/08 3:14	WC080722-2	820		788.5	mg/L	96.2	90	110			
WG248934LCSW14	LCSW	07/29/08 6:13	WC080722-2	820		787.9	mg/L	96.1	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.952	mg/L	97.6	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.09	0.09			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	1		.967	mg/L	96.7	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	1	U	1.024	mg/L	102.4	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	1	U	.992	mg/L	99.2	85	115	3.17	20	
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.9	mg/L	95	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.09	0.09			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	1		.986	mg/L	98.6	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	1	U	1.007	mg/L	100.7	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	1	U	.986	mg/L	98.6	85	115	2.11	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.02006		.02059	mg/L	102.6	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0012	0.0012			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.01		.01004	mg/L	100.4	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.01	.0014	.01086	mg/L	94.6	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.01	.0014	.0109	mg/L	95	70	130	0.37	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.05154	mg/L	103.1	90	110			
WG249015ICB	ICB	07/30/08 12:56				.00063	mg/L		-0.0015	0.0015			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04972	mg/L	99.4	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.05	.0047	.0535	mg/L	97.6	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.05	.0047	.0532	mg/L	97	70	130	0.56	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: OJ06DZ

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		2.0388	mg/L	101.9	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.009	0.009			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.4873	mg/L	97.5	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	.112	.6012	mg/L	97.8	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	.112	.5843	mg/L	94.5	85	115	2.85	20	

WG249368

WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.9921	mg/L	99.6	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.009	0.009			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.4938	mg/L	98.8	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	.5	.058	.5415	mg/L	96.7	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	.5	.058	.5336	mg/L	95.1	85	115	1.47	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.04874	mg/L	97.5	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05005		.04594	mg/L	91.8	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.05005	U	.04896	mg/L	97.8	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.05005	U	.04907	mg/L	98	70	130	0.22	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.04996	mg/L	99.9	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04848	mg/L	97	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.05	U	.04846	mg/L	96.9	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.05	U	.04789	mg/L	95.8	70	130	1.18	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	100		94.52	mg/L	94.5	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.6	0.6			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	67.97008		65.26	mg/L	96	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	67.97008	85.3	149.02	mg/L	93.7	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	67.97008	85.3	144.79	mg/L	87.5	85	115	2.88	20	
WG249406													
WG249406ICV	ICV	08/05/08 21:38	II080717-3	100		95.67	mg/L	95.7	95	105			
WG249406ICB	ICB	08/05/08 21:42				U	mg/L		-0.6	0.6			
WG249406LFB	LFB	08/05/08 21:56	II080730-2	67.97008		68.02	mg/L	100.1	85	115			
L70727-02AS	AS	08/05/08 23:14	II080730-2	67.97008	117	180.86	mg/L	94	85	115			
L70727-02ASD	ASD	08/05/08 23:18	II080730-2	67.97008	117	177.23	mg/L	88.6	85	115	2.03	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: OJ06DZ

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249380													
WG249380ICV	ICV	08/05/08 13:19	WI071212-1	54.945		55.8	mg/L	101.6	90	110			
WG249380ICB	ICB	08/05/08 13:20				U	mg/L		-3	3			
WG249460													
WG249460ICV	ICV	08/05/08 17:33	WI071212-1	54.945		56	mg/L	101.9	90	110			
WG249460ICB	ICB	08/05/08 17:34				U	mg/L		-3	3			
WG249460LFB1	LFB	08/05/08 17:35	WI080620-3	30		29.3	mg/L	97.7	90	110			
WG249460LFB2	LFB	08/05/08 18:02	WI080620-3	30		29.4	mg/L	98	90	110			
L70726-01AS	AS	08/05/08 18:17	WI080620-3	150	139	293.1	mg/L	102.7	90	110			
L70726-02DUP	DUP	08/05/08 18:20			164	157.3	mg/L				4.2	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.91	mg/L	95.5	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.483	mg/L	96.6	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	U	.497	mg/L	99.4	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	U	.481	mg/L	96.2	85	115	3.27	20	
WG249406													
WG249406ICV	ICV	08/05/08 21:38	II080717-3	2		1.903	mg/L	95.2	95	105			
WG249406ICB	ICB	08/05/08 21:42				U	mg/L		-0.03	0.03			
WG249406LFB	LFB	08/05/08 21:56	II080730-2	.5		.501	mg/L	100.2	85	115			
L70727-02AS	AS	08/05/08 23:14	II080730-2	.5	U	.499	mg/L	99.8	85	115			
L70727-02ASD	ASD	08/05/08 23:18	II080730-2	.5	U	.491	mg/L	98.2	85	115	1.62	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.903	mg/L	95.2	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.484	mg/L	96.8	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	U	.488	mg/L	97.6	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	U	.483	mg/L	96.6	85	115	1.03	20	
WG249406													
WG249406ICV	ICV	08/05/08 21:38	II080717-3	2		1.909	mg/L	95.5	95	105			
WG249406ICB	ICB	08/05/08 21:42				U	mg/L		-0.03	0.03			
WG249406LFB	LFB	08/05/08 21:56	II080730-2	.5		.504	mg/L	100.8	85	115			
L70727-02AS	AS	08/05/08 23:14	II080730-2	.5	U	.505	mg/L	101	85	115			
L70727-02ASD	ASD	08/05/08 23:18	II080730-2	.5	U	.498	mg/L	99.6	85	115	1.4	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: **OJ06DZ**

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248934													
WG248934LCSW1	LCSW	07/28/08 17:11	PCN29501	1408.8		1426	µmhos/cm	101.2	90	110			
WG248934LCSW4	LCSW	07/28/08 20:27	PCN29501	1408.8		1426	µmhos/cm	101.2	90	110			
L70727-02DUP	DUP	07/28/08 22:14			1260	1257	µmhos/cm				0.2	20	
WG248934LCSW7	LCSW	07/28/08 23:56	PCN29501	1408.8		1414	µmhos/cm	100.4	90	110			
WG248934LCSW10	LCSW	07/29/08 3:04	PCN29501	1408.8		1411	µmhos/cm	100.2	90	110			
WG248934LCSW13	LCSW	07/29/08 6:02	PCN29501	1408.8		1402	µmhos/cm	99.5	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.936	mg/L	96.8	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.483	mg/L	96.6	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	U	.492	mg/L	98.4	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	U	.482	mg/L	96.4	85	115	2.05	20	
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.899	mg/L	95	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.488	mg/L	97.6	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	.5	U	.486	mg/L	97.2	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	.5	U	.477	mg/L	95.4	85	115	1.87	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249549													
WG249549ICV	ICV	08/06/08 18:07	WI080726-5	.3		.2716	mg/L	90.5	90	110			
WG249549ICB	ICB	08/06/08 18:08				U	mg/L		-0.009	0.009			
WG249552													
WG249552ICV	ICV	08/06/08 18:27	WI080726-5	.3		.2735	mg/L	91.2	90	110			
WG249552ICB	ICB	08/06/08 18:28				U	mg/L		-0.015	0.015			
WG249496LRB	LRB	08/06/08 18:29				U	mg/L		-0.015	0.015			
WG249496LFB	LFB	08/06/08 18:30	WI080726-2	.2		.1992	mg/L	99.6	90	110			
L70724-03DUP	DUP	08/06/08 18:31			U	U	mg/L				0	20	RA
L70901-07LFM	LFM	08/06/08 18:45	WI080726-2	.2	U	.2025	mg/L	101.3	90	110			
WG249730													
WG249730ICV	ICV	08/09/08 21:03	WI080726-5	.3		.2817	mg/L	93.9	90	110			
WG249730ICB	ICB	08/09/08 21:04				U	mg/L		-0.015	0.015			
WG249582LRB	LRB	08/09/08 21:07				U	mg/L		-0.015	0.015			
WG249582LFB	LFB	08/09/08 21:08	WI080726-2	.2		.1985	mg/L	99.3	90	110			
L70975-02LFM	LFM	08/09/08 21:20	WI080726-2	.2	U	.1975	mg/L	98.8	90	110			
WG249730ICV1	ICV	08/11/08 15:10	WI080726-5	.3		.2783	mg/L	92.8	90	110			
WG249730ICB1	ICB	08/11/08 15:11				U	mg/L		-0.015	0.015			
L70975-01DUP	DUP	08/11/08 15:12			U	U	mg/L				0	20	RA

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: **OJ06DZ**

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249168													
WG249168ICV	ICV	07/31/08 12:46	WC080725-1	2		2.01	mg/L	100.5	90	110			
WG249168ICB	ICB	07/31/08 12:52				U	mg/L		-0.3	0.3			
WG249168LFB1	LFB	07/31/08 12:58	WC080716-3	5		5.5	mg/L	110	90	110			
L70724-02AS	AS	07/31/08 13:51	WC080716-3	5	U	4.98	mg/L	99.6	90	110			
L70724-02DUP	DUP	07/31/08 13:55			U	U	mg/L				0	20	RA
WG249168LFB2	LFB	07/31/08 14:36	WC080716-3	5		5.44	mg/L	108.8	90	110			

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.892	mg/L	94.6	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.06	0.06			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	1		.974	mg/L	97.4	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	1	.11	1.109	mg/L	99.9	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	1	.11	1.079	mg/L	96.9	85	115	2.74	20	

WG249406

WG249406ICV	ICV	08/05/08 21:38	II080717-3	2		1.906	mg/L	95.3	95	105			
WG249406ICB	ICB	08/05/08 21:42				U	mg/L		-0.06	0.06			
WG249406LFB	LFB	08/05/08 21:56	II080730-2	1		1.029	mg/L	102.9	85	115			
L70727-02AS	AS	08/05/08 23:14	II080730-2	1	U	1.04	mg/L	104	85	115			
L70727-02ASD	ASD	08/05/08 23:18	II080730-2	1	U	1.019	mg/L	101.9	85	115	2.04	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.04992	mg/L	99.8	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04629	mg/L	92.6	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.05	.0001	.04687	mg/L	93.5	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.05	.0001	.04638	mg/L	92.6	70	130	1.05	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	100		95.96	mg/L	96	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.6	0.6			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	49.96908		48.03	mg/L	96.1	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	49.96908	61	108.76	mg/L	95.6	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	49.96908	61	106.03	mg/L	90.1	85	115	2.54	20	
WG249406													
WG249406ICV	ICV	08/05/08 21:38	II080717-3	100		95.53	mg/L	95.5	95	105			
WG249406ICB	ICB	08/05/08 21:42				U	mg/L		-0.6	0.6			
WG249406LFB	LFB	08/05/08 21:56	II080730-2	49.96908		49.72	mg/L	99.5	85	115			
L70727-02AS	AS	08/05/08 23:14	II080730-2	49.96908	59.2	108.01	mg/L	97.7	85	115			
L70727-02ASD	ASD	08/05/08 23:18	II080730-2	49.96908	59.2	105.14	mg/L	91.9	85	115	2.69	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: OJ06DZ

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.9992	mg/L	100	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.015	0.015			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.5074	mg/L	101.5	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	.018	.5352	mg/L	103.4	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	.018	.5213	mg/L	100.7	85	115	2.63	20	

WG249368

WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.9574	mg/L	97.9	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.015	0.015			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.5148	mg/L	103	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	.5	.006	.5151	mg/L	101.8	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	.5	.006	.505	mg/L	99.8	85	115	1.98	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249012													
WG249012ICV	ICV	07/30/08 16:54	II080723-2	.00501		.00522	mg/L	104.2	95	105			
WG249012ICB	ICB	07/30/08 16:56				U	mg/L		-0.0002	0.0002			
WG249029													
WG249029LRB	LRB	07/30/08 18:30				U	mg/L		-0.00044	0.00044			
WG249029LFB	LFB	07/30/08 18:33	II080711-8	.002		.00201	mg/L	100.5	85	115			
L70721-01LFM	LFM	07/30/08 18:38	II080711-8	.002	U	.00206	mg/L	103	85	115			
L70721-01LFMD	LFMD	07/30/08 18:40	II080711-8	.002	U	.00199	mg/L	99.5	85	115	3.46	20	
L70726-03LFM	LFM	07/30/08 19:10	II080711-8	.002	U	.00215	mg/L	107.5	85	115			
L70726-03LFMD	LFMD	07/30/08 19:12	II080711-8	.002	U	.00213	mg/L	106.5	85	115	0.93	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.947	mg/L	97.4	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.478	mg/L	95.6	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	U	.481	mg/L	96.2	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	U	.465	mg/L	93	85	115	3.38	20	
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.893	mg/L	94.7	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.477	mg/L	95.4	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	.5	.01	.487	mg/L	95.4	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	.5	.01	.485	mg/L	95	85	115	0.41	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: **OJ06DZ**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249404													
WG249404ICV	ICV	08/05/08 17:05	II080508-3	2.004		2.009	mg/L	100.2	95	105			
WG249404ICB	ICB	08/05/08 17:08				U	mg/L		-0.03	0.03			
WG249404LFB	LFB	08/05/08 17:21	II080730-2	.4985		.494	mg/L	99.1	85	115			
L70723-01AS	AS	08/05/08 18:14	II080730-2	.4985	U	.506	mg/L	101.5	85	115			
L70723-01ASD	ASD	08/05/08 18:17	II080730-2	.4985	U	.499	mg/L	100.1	85	115	1.39	20	

WG249489

WG249489ICV	ICV	08/06/08 12:19	II080508-3	2.004		1.99	mg/L	99.3	95	105			
WG249489ICB	ICB	08/06/08 12:22				U	mg/L		-0.03	0.03			
WG249489LFB	LFB	08/06/08 12:35	II080730-2	.4985		.475	mg/L	95.3	85	115			
L70721-01AS	AS	08/06/08 12:42	II080730-2	.4985	U	.484	mg/L	97.1	85	115			
L70721-01ASD	ASD	08/06/08 12:45	II080730-2	.4985	U	.481	mg/L	96.5	85	115	0.62	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
WG249318													
WG249318ICV	ICV	08/02/08 19:06	WI080613-1	2.416		2.411	mg/L	99.8	90	110			
WG249318ICB	ICB	08/02/08 19:07				U	mg/L		-0.06	0.06			
WG249318LFB1	LFB	08/02/08 19:11	WI080312-1	2		1.974	mg/L	98.7	90	110			
L70567-10AS	AS	08/02/08 19:32	WI080312-1	2	1.34	3.484	mg/L	107.2	90	110			
L70577-01DUP	DUP	08/02/08 19:35			.32	.316	mg/L				1.3	20	
WG249318LFB2	LFB	08/02/08 19:50	WI080312-1	2		2.001	mg/L	100.1	90	110			

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248934													
WG248934LCSW3	LCSW	07/28/08 17:25	PCN29627	6		6.39	units	106.5	90	110			
WG248934LCSW6	LCSW	07/28/08 20:42	PCN29627	6		6.4	units	106.7	90	110			
L70727-02DUP	DUP	07/28/08 22:14			8.3	8.3	units				0	20	
WG248934LCSW9	LCSW	07/29/08 0:11	PCN29627	6		6.4	units	106.7	90	110			
WG248934LCSW12	LCSW	07/29/08 3:18	PCN29627	6		6.41	units	106.8	90	110			
WG248934LCSW15	LCSW	07/29/08 6:16	PCN29627	6		6.39	units	106.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	20		20.24	mg/L	101.2	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.9	0.9			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	99.76186		99.95	mg/L	100.2	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	99.76186	.8	107.7	mg/L	107.2	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	99.76186	.8	104.59	mg/L	104	85	115	2.93	20	

WG249368

WG249368ICV	ICV	08/05/08 2:09	II080717-3	20		19.51	mg/L	97.6	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.9	0.9			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	99.76186		100.44	mg/L	100.7	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	99.76186	3.2	108.84	mg/L	105.9	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	99.76186	3.2	106.77	mg/L	103.8	85	115	1.92	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: OJ06DZ

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248891													
WG248891PBW	PBW	07/28/08 9:25				U	mg/L		-20	20			
WG248891LCSW	LCSW	07/28/08 9:26	PCN30199	260		280	mg/L	107.7	80	120			
L70728-01DUP	DUP	07/28/08 9:59			590	590	mg/L				0	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.05073	mg/L	101.5	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04717	mg/L	94.3	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.05	.0106	.06055	mg/L	99.9	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.05	.0106	.05983	mg/L	98.5	70	130	1.2	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	100		100.13	mg/L	100.1	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.9	0.9			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	98.21624		98.7	mg/L	100.5	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	98.21624	180	273.57	mg/L	95.3	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	98.21624	180	267.05	mg/L	88.6	85	115	2.41	20	
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	100		96.34	mg/L	96.3	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.9	0.9			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	98.21624		98.33	mg/L	100.1	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	98.21624	149	243.47	mg/L	96.2	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	98.21624	149	241.57	mg/L	94.3	85	115	0.78	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249046													
WG249046PBW	PBW	07/30/08 10:10				U	mg/L		-30	30			
WG249046LCSW	LCSW	07/30/08 10:12	WC080514-1	100		103	mg/L	103	80	120			
L70737-01DUP	DUP	07/30/08 10:37			670	680	mg/L				1.5	20	
WG249159													
WG249159PBW	PBW	07/31/08 10:35				U	mg/L		-30	30			
WG249159LCSW	LCSW	07/31/08 10:39	WC080514-1	100		105	mg/L	105	80	120			
L70726-05DUP	DUP	07/31/08 12:10			1760	1766	mg/L				0.3	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

Project ID: OJ06DZ

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.05099	mg/L	102	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.0501		.0463	mg/L	92.4	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.0501	U	.04759	mg/L	95	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.0501	U	.04724	mg/L	94.3	70	130	0.74	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.0484	mg/L	96.8	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04557	mg/L	91.1	85	115			
L70721-01AS	AS	07/30/08 13:20	MS080714-1	.05	.0047	.05585	mg/L	102.3	70	130			
L70721-01ASD	ASD	07/30/08 13:25	MS080714-1	.05	.0047	.05559	mg/L	101.8	70	130	0.47	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	II080717-3	2		1.933	mg/L	96.7	95	105			
WG249365ICB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	II080730-2	.5		.489	mg/L	97.8	85	115			
L70732-01AS	AS	08/05/08 1:21	II080730-2	.5	.01	.516	mg/L	101.2	85	115			
L70732-01ASD	ASD	08/05/08 1:24	II080730-2	.5	.01	.503	mg/L	98.6	85	115	2.55	20	
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.896	mg/L	94.8	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.492	mg/L	98.4	85	115			
L70727-01AS	AS	08/05/08 2:42	II080730-2	.5	U	.503	mg/L	100.6	85	115			
L70727-01ASD	ASD	08/05/08 2:45	II080730-2	.5	U	.501	mg/L	100.2	85	115	0.4	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L70726

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70726-01	WG249552	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).
	WG249168	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).
L70726-02	WG249552	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).
	WG249168	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).
L70726-03	WG249552	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).
	WG249168	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).
L70726-04	WG249552	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).
	WG249168	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).
L70726-05	WG249730	Cyanide, total	M335.4 - Colorimetric w/ distillation	C4	Confirmatory analysis was past holding time.
			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).
	WG249168	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).
L70726-06	WG249552	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).
	WG249168	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).
L70726-07	WG249552	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).
	WG249168	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70726**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70726
 Date Received: 7/25/2008
 Received By:
 Date Printed: 7/25/2008

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)
2045	2.1	15

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

Notes

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70726
Date Received: 7/25/2008
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
L70726-01	IW-4		Y		Y							<input type="checkbox"/>
L70726-02	IW-5		Y		Y							<input type="checkbox"/>
L70726-03	IW-8		Y		Y							<input type="checkbox"/>
L70726-04	IW-9		Y		Y							<input type="checkbox"/>
L70726-05	IW-22		Y		Y							<input type="checkbox"/>
L70726-06	IW-23		Y		Y							<input type="checkbox"/>
L70726-07	IW-24		Y		Y							<input type="checkbox"/>

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: _____

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

Name: Bill Dorris
Company: Freeport McMoran Sierrita
E-mail: billy-dorris@fmi.com

Address: 6200 W Duval Mine Rd
Green Valley, AZ 85614
Telephone: 520-648-8873

Name: Dan Simpson
Company: Hydro Geo Chem

E-mail: dans@hginc.com
Telephone: 520-293-1500 EXT 133

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.

ANALYSES REQUESTED (attach list or use quote number)

Quote #:
Project/PO #: 0506D2
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material?

of Containers

AMBIENT-TB

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	#	An
Iw-4	7-23-08 / 12:25	GW	5	X
IW-5	7-23-08 / 12:48	GW	5	X
Iw-8	7-23-08 / 12:05	GW	5	X
Iw-9	7-23-08 / 12:15	GW	5	X
Iw-22	7-23-08 / 13:25	GW	5	X
Iw-23	7-23-08 / 13:05	GW	5	X
Iw-24	7-23-08 / 12:40	GW	5	X

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

REMARKS/ SAMPLE DISCLOSURES

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

PAGE

of

UPS TRACKING # 1Z 867 7E4 23 1000 6126

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Billy F. Davis

7-24-08/15:00

MS

7-25-88
10:55

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

August 08, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70737- SULFATE ONLY

Bill Dorris:

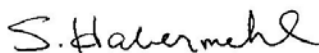
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 25, 2008. This project was assigned to ACZ's project number, L70737. Please reference this number in all future inquiries.

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 L70737. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-1

ACZ Sample ID: **L70737-01**

Date Sampled: 07/23/08 11:05

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	670			mg/L	10	50	07/30/08 10:34	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-2A

ACZ Sample ID: **L70737-02**

Date Sampled: 07/23/08 11:20

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	60			mg/L	10	50	07/30/08 10:39	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-3A

ACZ Sample ID: **L70737-03**

Date Sampled: 07/23/08 11:47

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1460			mg/L	10	50	07/30/08 10:41	gkj

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-10

ACZ Sample ID: **L70737-04**

Date Sampled: 07/23/08 13:15

Date Received: 07/25/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1740			mg/L	10	50	07/30/08 10:44	gkj

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248934													
WG248934PBW1	PBW	07/28/08 17:10				15.1	mg/L		-20	20			
WG248934LCSW2	LCSW	07/28/08 17:22	WC080722-2	820		781.7	mg/L	95.3	90	110			
WG248934PBW2	PBW	07/28/08 20:26				U	mg/L		-20	20			
WG248934LCSW5	LCSW	07/28/08 20:39	WC080722-2	820		784.8	mg/L	95.7	90	110			
WG248934PBW3	PBW	07/28/08 23:55				U	mg/L		-20	20			
WG248934LCSW8	LCSW	07/29/08 0:07	WC080722-2	820		784.2	mg/L	95.6	90	110			
L70738-02DUP	DUP	07/29/08 1:34			193	192.7	mg/L				0.2	20	
WG248934PBW4	PBW	07/29/08 3:02				U	mg/L		-20	20			
WG248934LCSW11	LCSW	07/29/08 3:14	WC080722-2	820		788.5	mg/L	96.2	90	110			
WG248934LCSW14	LCSW	07/29/08 6:13	WC080722-2	820		787.9	mg/L	96.1	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.9	mg/L	95	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.09	0.09			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	1		.986	mg/L	98.6	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	1	15	15.214	mg/L	21.4	85	115			M3
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	1	15	15.027	mg/L	2.7	85	115	1.24	20	M3

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.02006		.02059	mg/L	102.6	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0012	0.0012			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.01		.01004	mg/L	100.4	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.01	U	.00955	mg/L	95.5	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.01	U	.00953	mg/L	95.3	70	130	0.21	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.05154	mg/L	103.1	90	110			
WG249015ICB	ICB	07/30/08 12:56				.00063	mg/L		-0.0015	0.0015			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04972	mg/L	99.4	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.05	.0042	.0533	mg/L	98.2	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.05	.0042	.05299	mg/L	97.6	70	130	0.58	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.9921	mg/L	99.6	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.009	0.009			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.4938	mg/L	98.8	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	.5	.051	.5573	mg/L	101.3	85	115			
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	.5	.051	.5487	mg/L	99.5	85	115	1.56	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: **OJ06DZ**

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.04874	mg/L	97.5	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05005		.04594	mg/L	91.8	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.05005	U	.05053	mg/L	101	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.05005	U	.05044	mg/L	100.8	70	130	0.18	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.04996	mg/L	99.9	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04848	mg/L	97	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.05	U	.04661	mg/L	93.2	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.05	U	.04692	mg/L	93.8	70	130	0.66	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	II080717-3	100		95.41	mg/L	95.4	95	105			
WG249409ICB	ICB	08/06/08 0:03				U	mg/L		-0.6	0.6			
WG249409LFB	LFB	08/06/08 0:16	II080730-2	67.97008		70.45	mg/L	103.6	85	115			
L70731-04AS	AS	08/06/08 0:22	II080730-2	67.97008	135	195.34	mg/L	88.8	85	115			
L70731-04ASD	ASD	08/06/08 0:26	II080730-2	67.97008	135	192.97	mg/L	85.3	85	115	1.22	20	
L70903-01AS	AS	08/06/08 1:25	II080730-2	67.97008	49.1	119.83	mg/L	104.1	85	115			
L70903-01ASD	ASD	08/06/08 1:28	II080730-2	67.97008	49.1	119.56	mg/L	103.7	85	115	0.23	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249380													
WG249380ICV	ICV	08/05/08 13:19	WI071212-1	54.945		55.8	mg/L	101.6	90	110			
WG249380ICB	ICB	08/05/08 13:20				U	mg/L		-3	3			
WG249460													
WG249460ICV	ICV	08/05/08 17:33	WI071212-1	54.945		56	mg/L	101.9	90	110			
WG249460ICB	ICB	08/05/08 17:34				U	mg/L		-3	3			
WG249460LFB1	LFB	08/05/08 17:35	WI080620-3	30		29.3	mg/L	97.7	90	110			
L70727-04AS	AS	08/05/08 17:50	WI080620-3	30	26	56.3	mg/L	101	90	110			
L70727-05DUP	DUP	08/05/08 17:52			15	15.1	mg/L				0.7	20	
WG249460LFB2	LFB	08/05/08 18:02	WI080620-3	30		29.4	mg/L	98	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: OJ06DZ

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	II080717-3	2		1.929	mg/L	96.5	95	105			
WG249409ICB	ICB	08/06/08 0:03				U	mg/L		-0.03	0.03			
WG249409LFB	LFB	08/06/08 0:16	II080730-2	.5		.517	mg/L	103.4	85	115			
L70731-04AS	AS	08/06/08 0:22	II080730-2	.5	U	.511	mg/L	102.2	85	115			
L70731-04ASD	ASD	08/06/08 0:26	II080730-2	.5	U	.513	mg/L	102.6	85	115	0.39	20	
L70903-01AS	AS	08/06/08 1:25	II080730-2	.5	U	.541	mg/L	108.2	85	115			
L70903-01ASD	ASD	08/06/08 1:28	II080730-2	.5	U	.537	mg/L	107.4	85	115	0.74	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	II080717-3	2		1.94	mg/L	97	95	105			
WG249409ICB	ICB	08/06/08 0:03				U	mg/L		-0.03	0.03			
WG249409LFB	LFB	08/06/08 0:16	II080730-2	.5		.525	mg/L	105	85	115			
L70731-04AS	AS	08/06/08 0:22	II080730-2	.5	U	.523	mg/L	104.6	85	115			
L70731-04ASD	ASD	08/06/08 0:26	II080730-2	.5	U	.52	mg/L	104	85	115	0.58	20	
L70903-01AS	AS	08/06/08 1:25	II080730-2	.5	.02	.553	mg/L	106.6	85	115			
L70903-01ASD	ASD	08/06/08 1:28	II080730-2	.5	.02	.552	mg/L	106.4	85	115	0.18	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248934													
WG248934LCSW1	LCSW	07/28/08 17:11	PCN29501	1408.8		1426	µmhos/cm	101.2	90	110			
WG248934LCSW4	LCSW	07/28/08 20:27	PCN29501	1408.8		1426	µmhos/cm	101.2	90	110			
WG248934LCSW7	LCSW	07/28/08 23:56	PCN29501	1408.8		1414	µmhos/cm	100.4	90	110			
L70738-02DUP	DUP	07/29/08 1:34			455	455	µmhos/cm				0	20	
WG248934LCSW10	LCSW	07/29/08 3:04	PCN29501	1408.8		1411	µmhos/cm	100.2	90	110			
WG248934LCSW13	LCSW	07/29/08 6:02	PCN29501	1408.8		1402	µmhos/cm	99.5	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.899	mg/L	95	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.488	mg/L	97.6	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	.5	.07	.567	mg/L	99.4	85	115			
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	.5	.07	.558	mg/L	97.6	85	115	1.6	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: **OJ06DZ**

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249170													
WG249170ICV	ICV	07/31/08 13:22	WI080726-5	.3		.2701	mg/L	90	90	110			
WG249170ICB	ICB	07/31/08 13:23				U	mg/L		-0.015	0.015			
WG249173													
WG249173ICV	ICV	07/31/08 13:52	WI080726-5	.3		.3282	mg/L	109.4	90	110			
WG249173ICB	ICB	07/31/08 13:53				U	mg/L		-0.015	0.015			
WG249173ICV1	ICV	07/31/08 14:35	WI080726-5	.3		.2693	mg/L	89.8	90	110			
WG249173ICB1	ICB	07/31/08 14:36				U	mg/L		-0.015	0.015			
WG249047LRB	LRB	07/31/08 14:38				U	mg/L		-0.015	0.015			
WG249047LFB	LFB	07/31/08 14:39	WI080726-2	.2		.1908	mg/L	95.4	90	110			
L70698-01DUP	DUP	07/31/08 14:41			U	U	mg/L				0	20	RA
L70698-02LFM	LFM	07/31/08 14:42	WI080726-2	.2	U	.1951	mg/L	97.6	90	110			

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249168													
WG249168ICV	ICV	07/31/08 12:46	WC080725-1	2		2.01	mg/L	100.5	90	110			
WG249168ICB	ICB	07/31/08 12:52				U	mg/L		-0.3	0.3			
WG249168LFB1	LFB	07/31/08 12:58	WC080716-3	5		5.5	mg/L	110	90	110			
WG249168LFB2	LFB	07/31/08 14:36	WC080716-3	5		5.44	mg/L	108.8	90	110			
L70732-04AS	AS	07/31/08 15:36	WC080716-3	5	.3	4.86	mg/L	91.2	90	110			
L70732-04DUP	DUP	07/31/08 15:39			.3	.41	mg/L				31	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	II080717-3	2		1.923	mg/L	96.2	95	105			
WG249409ICB	ICB	08/06/08 0:03				U	mg/L		-0.06	0.06			
WG249409LFB	LFB	08/06/08 0:16	II080730-2	1		1.077	mg/L	107.7	85	115			
L70731-04AS	AS	08/06/08 0:22	II080730-2	1	U	1.096	mg/L	109.6	85	115			
L70731-04ASD	ASD	08/06/08 0:26	II080730-2	1	U	1.055	mg/L	105.5	85	115	3.81	20	
L70903-01AS	AS	08/06/08 1:25	II080730-2	1	4.58	5.358	mg/L	77.8	85	115			M3
L70903-01ASD	ASD	08/06/08 1:28	II080730-2	1	4.58	5.325	mg/L	74.5	85	115	0.62	20	M3

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.04992	mg/L	99.8	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04629	mg/L	92.6	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.05	U	.04683	mg/L	93.7	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.05	U	.0468	mg/L	93.6	70	130	0.06	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: OJ06DZ

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	II080717-3	100		97.44	mg/L	97.4	95	105			
WG249409ICB	ICB	08/06/08 0:03				U	mg/L		-0.6	0.6			
WG249409LFB	LFB	08/06/08 0:16	II080730-2	49.96908		51.85	mg/L	103.8	85	115			
L70731-04AS	AS	08/06/08 0:22	II080730-2	49.96908	69.6	117.23	mg/L	95.3	85	115			
L70731-04ASD	ASD	08/06/08 0:26	II080730-2	49.96908	69.6	117.63	mg/L	96.1	85	115	0.34	20	
L70903-01AS	AS	08/06/08 1:25	II080730-2	49.96908	15.5	69.06	mg/L	107.2	85	115			
L70903-01ASD	ASD	08/06/08 1:28	II080730-2	49.96908	15.5	68.97	mg/L	107	85	115	0.13	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.9574	mg/L	97.9	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.015	0.015			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.5148	mg/L	103	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	.5	1.22	1.6597	mg/L	87.9	85	115			
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	.5	1.22	1.6373	mg/L	83.5	85	115	1.36	20	MA

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249012													
WG249012ICV	ICV	07/30/08 16:54	II080723-2	.00501		.00522	mg/L	104.2	95	105			
WG249012ICB	ICB	07/30/08 16:56				U	mg/L		-0.0002	0.0002			
WG249029													
WG249029LRB	LRB	07/30/08 18:30				U	mg/L		-0.00044	0.00044			
WG249029LFB	LFB	07/30/08 18:33	II080711-8	.002		.00201	mg/L	100.5	85	115			
L70726-03LFM	LFM	07/30/08 19:10	II080711-8	.002	U	.00215	mg/L	107.5	85	115			
L70726-03LFMD	LFMD	07/30/08 19:12	II080711-8	.002	U	.00213	mg/L	106.5	85	115	0.93	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.893	mg/L	94.7	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.477	mg/L	95.4	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	.5	U	.49	mg/L	98	85	115			
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	.5	U	.49	mg/L	98	85	115	0	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: **OJ06DZ**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	II080717-3	2		1.913	mg/L	95.7	95	105			
WG249409ICB	ICB	08/06/08 0:03				U	mg/L		-0.03	0.03			
WG249409LFB	LFB	08/06/08 0:16	II080730-2	.4985		.511	mg/L	102.5	85	115			
L70731-04AS	AS	08/06/08 0:22	II080730-2	.4985	.03	.539	mg/L	102.1	85	115			
L70731-04ASD	ASD	08/06/08 0:26	II080730-2	.4985	.03	.529	mg/L	100.1	85	115	1.87	20	
L70903-01AS	AS	08/06/08 1:25	II080730-2	.4985	.02	.549	mg/L	106.1	85	115			
L70903-01ASD	ASD	08/06/08 1:28	II080730-2	.4985	.02	.547	mg/L	105.7	85	115	0.36	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
WG249318													
WG249318ICV	ICV	08/02/08 19:06	WI080613-1	2.416		2.411	mg/L	99.8	90	110			
WG249318ICB	ICB	08/02/08 19:07				U	mg/L		-0.06	0.06			
WG249321													
WG249321ICV	ICV	08/02/08 20:58	WI080613-1	2.416		2.488	mg/L	103	90	110			
WG249321ICB	ICB	08/02/08 20:59				U	mg/L		-0.06	0.06			
WG249321LFB1	LFB	08/02/08 21:01	WI080312-1	2		2.032	mg/L	101.6	90	110			
L70588-01AS	AS	08/02/08 21:03	WI080312-1	2		2.02	mg/L	101	90	110			
L70737-01DUP	DUP	08/02/08 21:06			1.86	1.858	mg/L				0.1	20	
WG249321LFB2	LFB	08/02/08 21:39	WI080312-1	2		2.134	mg/L	106.7	90	110			

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248934													
WG248934LCSW3	LCSW	07/28/08 17:25	PCN29627	6		6.39	units	106.5	90	110			
WG248934LCSW6	LCSW	07/28/08 20:42	PCN29627	6		6.4	units	106.7	90	110			
WG248934LCSW9	LCSW	07/29/08 0:11	PCN29627	6		6.4	units	106.7	90	110			
L70738-02DUP	DUP	07/29/08 1:34			8.3	8.27	units				0.4	20	
WG248934LCSW12	LCSW	07/29/08 3:18	PCN29627	6		6.41	units	106.8	90	110			
WG248934LCSW15	LCSW	07/29/08 6:16	PCN29627	6		6.39	units	106.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	20		19.51	mg/L	97.6	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.9	0.9			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	99.76186		100.44	mg/L	100.7	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	99.76186	5.4	111.38	mg/L	106.2	85	115			
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	99.76186	5.4	110.02	mg/L	104.9	85	115	1.23	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: OJ06DZ

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248903													
WG248903PBW	PBW	07/28/08 11:35				U	mg/L		-20	20			
WG248903LCSW	LCSW	07/28/08 11:36	PCN30199	260		266	mg/L	102.3	80	120			
L70737-02DUP	DUP	07/28/08 11:55			300	292	mg/L				2.7	20	
L70741-01DUP	DUP	07/28/08 12:14			2220	2228	mg/L				0.4	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.05073	mg/L	101.5	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04717	mg/L	94.3	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.05	.0033	.05253	mg/L	98.5	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.05	.0033	.05295	mg/L	99.3	70	130	0.8	20	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	100		96.34	mg/L	96.3	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.9	0.9			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	98.21624		98.33	mg/L	100.1	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	98.21624	5.5	107.65	mg/L	104	85	115			
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	98.21624	5.5	105.94	mg/L	102.3	85	115	1.6	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249046													
WG249046PBW	PBW	07/30/08 10:10				U	mg/L		-30	30			
WG249046LCSW	LCSW	07/30/08 10:12	WC080514-1	100		103	mg/L	103	80	120			
L70737-01DUP	DUP	07/30/08 10:37			670	680	mg/L				1.5	20	
L70746-01DUP	DUP	07/30/08 11:02			120	106	mg/L				12.4	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.05099	mg/L	102	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.0501		.0463	mg/L	92.4	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.0501	U	.0478	mg/L	95.4	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.0501	U	.04779	mg/L	95.4	70	130	0.02	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

Project ID: OJ06DZ

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/30/08 12:50	MS080722-4	.05		.0484	mg/L	96.8	90	110			
WG249015ICB	ICB	07/30/08 12:56				U	mg/L		-0.0003	0.0003			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05		.04557	mg/L	91.1	85	115			
L70727-03AS	AS	07/30/08 14:42	MS080714-1	.05	.006	.05828	mg/L	104.6	70	130			
L70727-03ASD	ASD	07/30/08 14:47	MS080714-1	.05	.006	.05817	mg/L	104.3	70	130	0.19	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	II080717-3	2		1.896	mg/L	94.8	95	105			
WG249368ICB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	II080730-2	.5		.492	mg/L	98.4	85	115			
L70733-01AS	AS	08/05/08 3:18	II080730-2	.5	12.3	11.778	mg/L	-104.4	85	115			M3
L70733-01ASD	ASD	08/05/08 3:21	II080730-2	.5	12.3	11.66	mg/L	-128	85	115	1.01	20	M3

FMI Gold & Copper - Sierrita

ACZ Project ID: L70737

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70737-01	WG249368	Aluminum, 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.
		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.
		Zinc, 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.
	WG249173	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).
	WG249168	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).
L70737-02	WG249368	Aluminum, 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.
		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.
		Zinc, 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.
	WG249173	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).
	WG249168	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).
L70737-03	WG249368	Aluminum, 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.
		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.
		Zinc, 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.
	WG249173	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).
	WG249168	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70737-04	WG249368	Aluminum, 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.
	WG249409	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.
	WG249368	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.
		Zinc, 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.
	WG249173	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).
	WG249168	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70737**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
OJ06DZ

ACZ Project ID: L70737
Date Received: 7/25/2008
Received By:
Date Printed: 7/25/2008

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)
2218	2	15

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

Notes

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70737
 Date Received: 7/25/2008
 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
L70737-01	IW-1		Y		Y							<input type="checkbox"/>
L70737-02	IW-2A		Y		Y							<input type="checkbox"/>
L70737-03	IW-3A		Y		Y							<input type="checkbox"/>
L70737-04	IW-10		Y		Y							<input type="checkbox"/>

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: _____

August 18, 2008

Report to:

Bill Dorris

FMI Gold & Copper - Sierrita

P.O. Box 527

Green Valley, AZ 85622-0527

Bill to:

Accounts Payable

FMI Gold & Copper - Sierrita

P.O. Box 2671

Phoenix, AZ 85002-2671

cc: Dan Simpson

Project ID: OJ069R

ACZ Project ID: L70780

Bill Dorris:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 29, 2008. This project has been assigned to ACZ's project number, L70780. Please reference this number in all future inquiries.

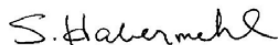
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L70780. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 18, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ069R

Sample ID: ESP-1

ACZ Sample ID: **L70780-01**

Date Sampled: 07/25/08 09:37

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	104		*	mg/L	1	5	08/08/08 22:45	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ069R

Sample ID: ESP-2

ACZ Sample ID: **L70780-02**

Date Sampled: 07/25/08 08:58

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	26.8		*	mg/L	0.5	3	08/04/08 21:01	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ069R

Sample ID: ESP-3

ACZ Sample ID: **L70780-03**

Date Sampled: 07/25/08 07:25

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	34.0		*	mg/L	0.5	3	08/04/08 21:19	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ069R

Sample ID: ESP-4

ACZ Sample ID: **L70780-04**

Date Sampled: 07/25/08 08:15

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	420		*	mg/L	10	50	08/08/08 23:03	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ069R

Sample ID: M-8

ACZ Sample ID: **L70780-05**

Date Sampled: 07/25/08 12:24

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	24.5		*	mg/L	0.5	3	08/08/08 23:21	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ069R

Sample ID: M-20

ACZ Sample ID: **L70780-06**

Date Sampled: 07/25/08 13:22

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	1550		*	mg/L	30	100	08/08/08 23:40	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70780**

Project ID: OJ069R

Sulfate

300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249363													
WG249363ICV	ICV	08/04/08 16:30	WI080521-1	50.1		49.97	mg/L	99.7	90	110			
WG249363ICB	ICB	08/04/08 16:48				U	mg/L		-1.5	1.5			
WG249363LFB	LFB	08/04/08 17:06	WI080702-9	30		30.81	mg/L	102.7	90	110			
L70666-01AS	AS	08/04/08 17:42	WI080702-9	60	119	159	mg/L	66.7	90	110			M2
L70666-01DUP	DUP	08/04/08 18:00			119	129.9	mg/L				8.8	20	
WG249655													
WG249655ICV	ICV	08/07/08 18:07	WI080521-1	50.1		50.33	mg/L	100.5	90	110			
WG249655ICB	ICB	08/07/08 18:25				U	mg/L		-1.5	1.5			
WG249663													
L70666-03AS	AS	08/08/08 21:33	WI080702-9	60	108	157.7	mg/L	82.8	90	110			M2
L70666-03DUP	DUP	08/08/08 21:51			108	110.7	mg/L				2.5	20	
WG249663ICV	ICV	08/11/08 15:32	WI080521-1	50.1		49.34	mg/L	98.5	90	110			
WG249663ICB	ICB	08/11/08 15:50				U	mg/L		-1.5	1.5			
WG249663LFB1	LFB	08/12/08 14:40	WI080702-9	30		30.95	mg/L	103.2	90	110			
WG249663LFB2	LFB	08/13/08 15:49	WI080702-9	30		30.43	mg/L	101.4	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70780**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70780-01	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70780-02	WG249363	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70780-03	WG249363	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70780-04	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70780-05	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70780-06	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70780**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ069R

ACZ Project ID: L70780
 Date Received: 7/29/2008
 Received By:
 Date Printed: 7/29/2008

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)
2209	5.5	15

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

Notes

FMI Gold & Copper - Sierrita
OJ069R

ACZ Project ID: L70780
Date Received: 7/29/2008
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
L70780-01	ESP-1									X		<input type="checkbox"/>
L70780-02	ESP-2									X		<input type="checkbox"/>
L70780-03	ESP-3									X		<input type="checkbox"/>
L70780-04	ESP-4									X		<input type="checkbox"/>
L70780-05	M-8									X		<input type="checkbox"/>
L70780-06	M-20									X		<input type="checkbox"/>

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: _____



Laboratories, Inc.

L70780

CHAIN of CUSTODY

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

Report to:

Name: Bill Dorris
Company: Freeport McMoran Sierrita
E-mail: billy-dorris@fmi.com

Address: 6200 W. Duval Mine Rd
Green Valley, AZ
Telephone: 85614

Copy of Report to:

Name: Dan Simpson
Company: Hydro Geo Chem

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.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:
Project/PO #: 05069R
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material?

of Containers

SAMPLE IDENTIFICATION	DATE:TIME	Matrix
ESP-1	7-25-08/9:37	GW
ESP-2	7-25-08/8:58	GW
ESP-3	7-25-08/7:25	GW
ESP-4	7-25-08/8:15	GW
M-8	7-25-08/12:24	GW
M-20	7-25-08/13:22	GW

Sulfate by
EPA 300
or
EPA 375

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

REMARKS/ SAMPLE DISCLOSURES

PAGE

of

UPS TRACKING # 1Z 867 7E4 23 1000 6117

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Billy F. Dorris

7-28-08/1500

(Signature)

7-29-08/10:20

August 15, 2008

Report to:

Bill Dorris

FMI Gold & Copper - Sierrita

P.O. Box 527

Green Valley, AZ 85622-0527

Bill to:

Accounts Payable

FMI Gold & Copper - Sierrita

P.O. Box 2671

Phoenix, AZ 85002-2671

cc: Dan Simpson

Project ID: PO#OJ069R

ACZ Project ID: L70781

Bill Dorris:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 29, 2008. This project has been assigned to ACZ's project number, L70781. Please reference this number in all future inquiries.

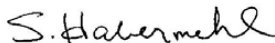
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L70781. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 15, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-1A

ACZ Sample ID: **L70781-01**

Date Sampled: 07/14/08 11:30

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	16.6	H	*	mg/L	0.5	3	08/12/08 5:00	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-1B

ACZ Sample ID: **L70781-02**

Date Sampled: 07/14/08 12:55

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	39.8	H	*	mg/L	0.5	3	08/12/08 5:18	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-1C

ACZ Sample ID: **L70781-03**

Date Sampled: 07/14/08 10:26

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	165	H	*	mg/L	3	10	08/12/08 5:36	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-2

ACZ Sample ID: **L70781-04**

Date Sampled: 07/14/08 15:36

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	472	H	*	mg/L	5	30	08/12/08 5:54	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-3B

ACZ Sample ID: **L70781-05**

Date Sampled: 07/14/08 14:37

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	37.8	H	*	mg/L	0.5	3	08/12/08 6:49	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: DUP071408A

ACZ Sample ID: **L70781-06**

Date Sampled: 07/14/08 00:00

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	446	H	*	mg/L	5	30	08/12/08 7:07	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-3C

ACZ Sample ID: **L70781-07**

Date Sampled: 07/17/08 10:07

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	126		*	mg/L	1	5	08/12/08 7:25	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: I-10

ACZ Sample ID: **L70781-08**

Date Sampled: 07/21/08 09:30

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	480		*	mg/L	10	50	08/12/08 7:43	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: M-9

ACZ Sample ID: **L70781-09**

Date Sampled: 07/21/08 12:35

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	68.7		*	mg/L	0.5	3	08/12/08 8:37	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: M-10

ACZ Sample ID: **L70781-10**

Date Sampled: 07/21/08 10:56

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	89.8		*	mg/L	0.5	3	08/12/08 8:55	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-4A

ACZ Sample ID: **L70781-11**

Date Sampled: 07/18/08 14:15

Date Received: 07/29/08

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	08/12/08 9:14	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-4B

ACZ Sample ID: **L70781-12**

Date Sampled: 07/18/08 11:24

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	34.8		*	mg/L	0.5	3	08/12/08 9:32	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-4C

ACZ Sample ID: **L70781-13**

Date Sampled: 07/18/08 13:30

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	78.6		*	mg/L	0.5	3	08/12/08 9:50	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: DUP071808A

ACZ Sample ID: **L70781-14**

Date Sampled: 07/18/08 00:00

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	35.1			mg/L	0.5	3	08/12/08 10:26	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-5B

ACZ Sample ID: **L70781-15**

Date Sampled: 07/24/08 09:09

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	343			mg/L	5	30	08/12/08 11:20	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-5C

ACZ Sample ID: **L70781-16**

Date Sampled: 07/24/08 11:30

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	233			mg/L	5	30	08/12/08 12:15	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-6A

ACZ Sample ID: **L70781-17**

Date Sampled: 07/24/08 13:49

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	16.9			mg/L	0.5	3	08/12/08 12:33	aml

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

Sample ID: MO-2007-6B

ACZ Sample ID: **L70781-18**

Date Sampled: 07/24/08 13:06

Date Received: 07/29/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	81.5			mg/L	0.5	3	08/12/08 12:51	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita
 Project ID: PO#OJ069R

ACZ Project ID: **L70781**

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249655													
WG249655 CV	ICV	08/07/08 18:07	WI080521-1	50.1		50.33	mg/L	100.5	90	110			
WG249655 CB	ICB	08/07/08 18:25				U	mg/L		-1.5	1.5			
WG249663													
L70666-03AS	AS	08/08/08 21:33	WI080702-9	60	108	157.7	mg/L	82.8	90	110			M2
L70666-03DUP	DUP	08/08/08 21:51			108	110.7	mg/L				2.5	20	
WG249663 CV	ICV	08/11/08 15:32	WI080521-1	50.1		49.34	mg/L	98.5	90	110			
WG249663 CB	ICB	08/11/08 15:50				U	mg/L		-1.5	1.5			
L70781-04AS	AS	08/12/08 6:13	WI080702-9	300	472	738.9	mg/L	89	90	110			M2
L70781-04DUP	DUP	08/12/08 6:31			472	479.4	mg/L				1.6	20	
L70781-14AS	AS	08/12/08 10:44	WI080702-9	30	35.1	62.52	mg/L	91.4	90	110			
L70781-14DUP	DUP	08/12/08 11:02			35.1	34.94	mg/L				0.5	20	
WG249663 LFB1	LFB	08/12/08 14:40	WI080702-9	30		30.95	mg/L	103.2	90	110			
WG249663 LFB2	LFB	08/13/08 15:49	WI080702-9	30		30.43	mg/L	101.4	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: L70781

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70781-01	WG249663	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.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-02	WG249663	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.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-03	WG249663	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.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-04	WG249663	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.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-05	WG249663	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.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-06	WG249663	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.
			300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-07	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-08	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-09	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-10	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-11	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-12	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L70781-13	WG249663	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70781**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
PO#OJ069R

ACZ Project ID: L70781
Date Received: 7/29/2008
Received By:
Date Printed: 7/29/2008

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)
2209	5.5	15

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

Notes

FMI Gold & Copper - Sierrita
PO#OJ069R

ACZ Project ID: L70781
Date Received: 7/29/2008
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
L70781-01	MO-2007-1A									X		<input type="checkbox"/>
L70781-02	MO-2007-1B									X		<input type="checkbox"/>
L70781-03	MO-2007-1C									X		<input type="checkbox"/>
L70781-04	MO-2007-2									X		<input type="checkbox"/>
L70781-05	MO-2007-3B									X		<input type="checkbox"/>
L70781-06	DUP071408A									X		<input type="checkbox"/>
L70781-07	MO-2007-3C									X		<input type="checkbox"/>
L70781-08	I-10									X		<input type="checkbox"/>
L70781-09	M-9									X		<input type="checkbox"/>
L70781-10	M-10									X		<input type="checkbox"/>
L70781-11	MO-2007-4A									X		<input type="checkbox"/>
L70781-12	MO-2007-4B									X		<input type="checkbox"/>
L70781-13	MO-2007-4C									X		<input type="checkbox"/>
L70781-14	DUP071808A									X		<input type="checkbox"/>
L70781-15	MO-2007-5B									X		<input type="checkbox"/>
L70781-16	MO-2007-5C									X		<input type="checkbox"/>
L70781-17	MO-2007-6A									X		<input type="checkbox"/>
L70781-18	MO-2007-6B									X		<input type="checkbox"/>

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.**

L70781

CHAIN of CUSTODY

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

Report to:

Name: Bill Dorris
Company: Freeport McMoran Sierrita
E-mail: billy-dorris@fmi.com

Address: 6200 W Duval Mine Rd
Green Valley AZ
Telephone: 85614

Copy of Report to:

Name: Dan Simpson
Company: Hydro Geo Chem

E-mail: danshginc.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.

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

Quote #:

Project/PO #: PO # 05069R

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material?

SAMPLE IDENTIFICATION			DATE:TIME	Matrix	# of Containers														
MO-2007-1A			7-14-08/11:30	GW		1													
MO-2007-1B			7-14-08/12:55	GW		1													
MO-2007-1C			7-14-08/10:26	GW		1													
MO-2007-2			7-14-08/15:36	GW		1													
MO-2007-3B			7-14-08/14:37	GW		1													
DUP071408A			7-14-08	GW		1													
MO-2007-3C			7-17-08/10:07	GW		1													
I-10			7-21-08/9:30	GW		1													
M-9			7-21-08/12:35	GW		1													
M-10			7-21-08/10:56	GW		1													

Sulfate by

EPA 300

or

EPA 375

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

REMARKS/ SAMPLE DISCLOSURES

PAGE

of

UPS TRACKING # 1Z 867 7E4 23 1000 6117

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Billy F. Dorris7-28-08/15:00LB7-29-08/10:20

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

August 18, 2008

Cc: Dan Simpson

Project ID: OJ06DZ
ACZ Project ID: L70901- SULFATE ONLY

Bill Dorris:

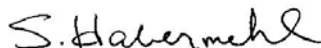
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 01, 2008. This project was assigned to ACZ's project number, L70901. Please reference this number in all future inquiries.

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 L70901. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

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

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



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-11

ACZ Sample ID: **L70901-01**

Date Sampled: 07/29/08 08:30

Date Received: 08/01/08

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	08/06/08 10:59	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: IW-21

ACZ Sample ID: **L70901-02**

Date Sampled: 07/29/08 08:45

Date Received: 08/01/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1670			mg/L	10	50	08/06/08 11:03	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-11

ACZ Sample ID: **L70901-03**

Date Sampled: 07/29/08 13:15

Date Received: 08/01/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1550			mg/L	10	50	08/06/08 11:07	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-12

ACZ Sample ID: **L70901-04**

Date Sampled: 07/30/08 12:25

Date Received: 08/01/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1170			mg/L	10	50	08/06/08 11:11	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: MH-10

ACZ Sample ID: **L70901-05**

Date Sampled: 07/31/08 11:10

Date Received: 08/01/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1550			mg/L	50	250	08/06/08 11:15	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: EB073108A

ACZ Sample ID: **L70901-06**

Date Sampled: 07/31/08 07:45

Date Received: 08/01/08

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	20	B	*	mg/L	10	50	08/07/08 10:54	tbd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sample ID: TB073108A

ACZ Sample ID: **L70901-07**

Date Sampled: 07/31/08 07:45

Date Received: 08/01/08

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D		U	*	mg/L	10	50	08/07/08 10:58	tbd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: OJ06DZ

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249346													
WG249346PBW1	PBW	08/04/08 15:10				3.1	mg/L		-20	20			
WG249346LCSW2	LCSW	08/04/08 15:21	WC080722-2	820		782.1	mg/L	95.4	90	110			
WG249346PBW2	PBW	08/04/08 18:05				U	mg/L		-20	20			
WG249346LCSW5	LCSW	08/04/08 18:18	WC080722-2	820		788	mg/L	96.1	90	110			
WG249346PBW3	PBW	08/04/08 21:15				U	mg/L		-20	20			
WG249346LCSW8	LCSW	08/04/08 21:27	WC080722-2	820		787.9	mg/L	96.1	90	110			
WG249346PBW4	PBW	08/05/08 1:34				U	mg/L		-20	20			
WG249346LCSW11	LCSW	08/05/08 1:47	WC080722-2	820		796	mg/L	97.1	90	110			
L70903-08DUP	DUP	08/05/08 2:58			U	U	mg/L				0	20	RA
WG249346LCSW14	LCSW	08/05/08 4:20	WC080722-2	820		793.9	mg/L	96.8	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	2		1.985	mg/L	99.3	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.09	0.09			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	1		.981	mg/L	98.1	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	1	U	1.084	mg/L	108.4	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	1	U	1.063	mg/L	106.3	85	115	1.96	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535ICV	ICV	08/08/08 7:22	MS080722-4	.02006		.02105	mg/L	104.9	90	110			
WG249535ICB	ICB	08/08/08 7:28				U	mg/L		-0.0012	0.0012			
WG249535LFB	LFB	08/08/08 7:40	MS080805-4	.01		.01012	mg/L	101.2	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.02	U	.0215	mg/L	107.5	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.02	U	.0219	mg/L	109.5	70	130	1.84	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535ICV	ICV	08/08/08 7:22	MS080722-4	.05		.05114	mg/L	102.3	90	110			
WG249535ICB	ICB	08/08/08 7:28				U	mg/L		-0.0015	0.0015			
WG249535LFB	LFB	08/08/08 7:40	MS080805-4	.05		.05181	mg/L	103.6	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1	.004	.1049	mg/L	100.9	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1	.004	.1058	mg/L	101.8	70	130	0.85	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	2		2.0021	mg/L	100.1	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.009	0.009			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	.5		.4978	mg/L	99.6	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	.5	.091	.6193	mg/L	105.7	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	.5	.091	.6327	mg/L	108.3	85	115	2.14	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: **OJ06DZ**

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535 CV	ICV	08/08/08 7:22	MS080722-4	.05		.05169	mg/L	103.4	90	110			
WG249535 CB	ICB	08/08/08 7:28				.00022	mg/L		-0.0003	0.0003			
WG249535 LFB	LFB	08/08/08 7:40	MS080805-4	.05005		.0504	mg/L	100.7	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1001	U	.09642	mg/L	96.3	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1001	U	.0987	mg/L	98.6	70	130	2.34	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535 CV	ICV	08/08/08 7:22	MS080722-4	.05		.05071	mg/L	101.4	90	110			
WG249535 CB	ICB	08/08/08 7:28				.00017	mg/L		-0.0003	0.0003			
WG249535 LFB	LFB	08/08/08 7:40	MS080805-4	.05		.05165	mg/L	103.3	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1	U	.09784	mg/L	97.8	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1	U	.0985	mg/L	98.5	70	130	0.67	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995 CV	ICV	08/15/08 1:18	II080717-3	100		94.92	mg/L	94.9	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.6	0.6			
WG249995 LFB	LFB	08/15/08 1:37	II080811-3	67.97008		65.88	mg/L	96.9	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	67.97008	67.7	130.82	mg/L	92.9	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	67.97008	67.7	133.12	mg/L	96.2	85	115	1.74	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249822													
WG249822 CB	ICB	08/12/08 11:29				U	mg/L		-3	3			
WG249822 CV	ICV	08/12/08 11:29	WI080808-1	54.945		57.2	mg/L	104.1	90	110			
WG249822 LFB2	LFB	08/12/08 12:23	WI080620-3	30		33	mg/L	110	90	110			
L70896-01AS	AS	08/12/08 12:23	WI080620-3	30	19	50.9	mg/L	106.3	90	110			
L70901-01DUP	DUP	08/12/08 12:34			140	136	mg/L				2.9	20	
WG249822 LFB1	LFB	08/12/08 13:01	WI080620-3	30		31.2	mg/L	104	90	110			

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995 CV	ICV	08/15/08 1:18	II080717-3	2		1.9	mg/L	95	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.03	0.03			
WG249995 LFB	LFB	08/15/08 1:37	II080811-3	.5		.49	mg/L	98	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	.5	U	.507	mg/L	101.4	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	.5	U	.524	mg/L	104.8	85	115	3.3	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: OJ06DZ

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG250065													
WG250065ICV	ICV	08/15/08 13:04	II080717-3	2		1.902	mg/L	95.1	95	105			
WG250065ICB	ICB	08/15/08 13:08				U	mg/L		-0.03	0.03			
WG250065LFB	LFB	08/15/08 13:21	II080811-3	.5		.499	mg/L	99.8	85	115			
L70896-01AS	AS	08/15/08 14:11	II080811-3	.5	U	.455	mg/L	91	85	115			
L70896-01ASD	ASD	08/15/08 14:14	II080811-3	.5	U	.456	mg/L	91.2	85	115	0.22	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249346													
WG249346LCSW1	LCSW	08/04/08 15:11	PCN29501	1408.8		1437	µmhos/cm	102	90	110			
WG249346LCSW4	LCSW	08/04/08 18:07	PCN29501	1408.8		1446	µmhos/cm	102.6	90	110			
WG249346LCSW7	LCSW	08/04/08 21:16	PCN29501	1408.8		1447	µmhos/cm	102.7	90	110			
WG249346LCSW10	LCSW	08/05/08 1:36	PCN29501	1408.8		1453	µmhos/cm	103.1	90	110			
L70903-08DUP	DUP	08/05/08 2:58			15000	15080	µmhos/cm				0.5	20	
WG249346LCSW13	LCSW	08/05/08 4:10	PCN29501	1408.8		1464	µmhos/cm	103.9	90	110			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	2		1.921	mg/L	96.1	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.03	0.03			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	.5		.493	mg/L	98.6	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	.5	U	.528	mg/L	105.6	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	.5	U	.541	mg/L	108.2	85	115	2.43	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249462													
WG249462ICV	ICV	08/05/08 17:52	WI080726-5	.3		.2968	mg/L	98.9	90	110			
WG249462ICB	ICB	08/05/08 17:53				U	mg/L		-0.015	0.015			
WG249347LRB	LRB	08/05/08 17:54				U	mg/L		-0.015	0.015			
WG249347LFB	LFB	08/05/08 17:55	WI080726-2	.2		.2085	mg/L	104.3	90	110			
L70883-01DUP	DUP	08/05/08 17:56			U	U	mg/L				0	20	RA
L70885-01LFM	LFM	08/05/08 17:58	WI080726-2	.2	U	.2101	mg/L	105.1	90	110			
L70901-02DUP	DUP	08/05/08 18:08			.008	.0091	mg/L				12.9	20	RA
L70901-03LFM	LFM	08/05/08 18:10	WI080726-2	.2	.01	.2288	mg/L	109.4	90	110			
WG249549													
WG249549ICV	ICV	08/06/08 18:07	WI080726-5	.3		.2716	mg/L	90.5	90	110			
WG249549ICB	ICB	08/06/08 18:08				U	mg/L		-0.009	0.009			
WG249552													
WG249552ICV	ICV	08/06/08 18:27	WI080726-5	.3		.2735	mg/L	91.2	90	110			
WG249552ICB	ICB	08/06/08 18:28				U	mg/L		-0.015	0.015			
WG249496LRB	LRB	08/06/08 18:29				U	mg/L		-0.015	0.015			
WG249496LFB	LFB	08/06/08 18:30	WI080726-2	.2		.1992	mg/L	99.6	90	110			
L70892-01DUP	DUP	08/06/08 18:43			U	U	mg/L				0	20	RA
L70901-07LFM	LFM	08/06/08 18:45	WI080726-2	.2	U	.2025	mg/L	101.3	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: OJ06DZ

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249758													
WG249758ICV	ICV	08/11/08 14:01	WC080808-1	2		1.99	mg/L	99.5	90	110			
WG249758ICB	ICB	08/11/08 14:06				U	mg/L		-0.3	0.3			
WG249758LFB1	LFB	08/11/08 14:12	WC080716-3	5		5.13	mg/L	102.6	90	110			
L70799-01AS	AS	08/11/08 14:17	WC080716-3	5	48.4	53.85	mg/L	109	90	110			
L70799-01DUP	DUP	08/11/08 14:24			48.4	48.84	mg/L				0.9	20	
WG249758LFB2	LFB	08/11/08 16:09	WC080716-3	5		5.09	mg/L	101.8	90	110			

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	2		1.919	mg/L	96	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.06	0.06			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	1		1.005	mg/L	100.5	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	1	.02	1.085	mg/L	106.5	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	1	.02	1.12	mg/L	110	85	115	3.17	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535ICV	ICV	08/08/08 7:22	MS080722-4	.05		.05098	mg/L	102	90	110			
WG249535ICB	ICB	08/08/08 7:28				.00028	mg/L		-0.0003	0.0003			
WG249535LFB	LFB	08/08/08 7:40	MS080805-4	.05		.05022	mg/L	100.4	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1	.0006	.09996	mg/L	99.4	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1	.0006	.101	mg/L	100.4	70	130	1.04	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	100		96.24	mg/L	96.2	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.6	0.6			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	49.96908		48.84	mg/L	97.7	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	49.96908	158	201.28	mg/L	86.6	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	49.96908	158	204.78	mg/L	93.6	85	115	1.72	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	2		1.9109	mg/L	95.5	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.015	0.015			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	.5		.513	mg/L	102.6	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	.5	.017	.5559	mg/L	107.8	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	.5	.017	.571	mg/L	110.8	85	115	2.68	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: OJ06DZ

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249436													
WG249436ICV	ICV	08/06/08 12:31	II080723-2	.00501		.00513	mg/L	102.4	95	105			
WG249436ICB	ICB	08/06/08 12:33				U	mg/L		-0.0002	0.0002			
WG249509													
WG249509LRB	LRB	08/06/08 17:48				U	mg/L		-0.00044	0.00044			
WG249509LFB	LFB	08/06/08 17:50	II080711-8	.002		.00178	mg/L	89	85	115			
L70856-01LFM	LFM	08/06/08 17:55	II080711-8	.002	U	.00188	mg/L	94	85	115			
L70856-01LFMD	LFMD	08/06/08 17:58	II080711-8	.002	U	.00182	mg/L	91	85	115	3.24	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	2		1.925	mg/L	96.3	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.03	0.03			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	.5		.484	mg/L	96.8	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	.5	.04	.508	mg/L	93.6	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	.5	.04	.506	mg/L	93.2	85	115	0.39	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG250065													
WG250065ICV	ICV	08/15/08 13:04	II080717-3	2		1.904	mg/L	95.2	95	105			
WG250065ICB	ICB	08/15/08 13:08				U	mg/L		-0.03	0.03			
WG250065LFB	LFB	08/15/08 13:21	II080811-3	.4985		.496	mg/L	99.5	85	115			
L70896-01AS	AS	08/15/08 14:11	II080811-3	.4985	U	.443	mg/L	88.9	85	115			
L70896-01ASD	ASD	08/15/08 14:14	II080811-3	.4985	U	.442	mg/L	88.7	85	115	0.23	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
WG249722													
WG249722ICV	ICV	08/09/08 16:33	WI080613-1	2.416		2.422	mg/L	100.2	90	110			
WG249722ICB	ICB	08/09/08 16:34				U	mg/L		-0.06	0.06			
WG249724													
WG249724ICV	ICV	08/09/08 17:02	WI080613-1	2.416		2.45	mg/L	101.4	90	110			
WG249724ICB	ICB	08/09/08 17:03				U	mg/L		-0.06	0.06			
WG249724LFB1	LFB	08/09/08 17:05	WI080312-1	2		1.952	mg/L	97.6	90	110			
L70897-01AS	AS	08/09/08 17:26	WI080312-1	2	.05	2.066	mg/L	100.8	90	110			
L70897-02DUP	DUP	08/09/08 17:28			U	.024	mg/L				200	20	RA
WG249724LFB2	LFB	08/09/08 17:43	WI080312-1	2		1.947	mg/L	97.4	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: **OJ06DZ**

pH (lab)

M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249346													
WG249346LCSW3	LCSW	08/04/08 15:24	PCN29627	6		6.07	units	101.2	90	110			
WG249346LCSW6	LCSW	08/04/08 18:21	PCN29627	6		6.11	units	101.8	90	110			
WG249346LCSW9	LCSW	08/04/08 21:29	PCN29627	6		6.11	units	101.8	90	110			
WG249346LCSW12	LCSW	08/05/08 1:50	PCN29627	6		6.12	units	102	90	110			
L70903-08DUP	DUP	08/05/08 2:58			2.6	2.62	units				0.8	20	
WG249346LCSW15	LCSW	08/05/08 4:23	PCN29627	6		6.15	units	102.5	90	110			

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	II080717-3	20		20.33	mg/L	101.7	95	105			
WG249995ICB	ICB	08/15/08 1:22				U	mg/L		-0.9	0.9			
WG249995LFB	LFB	08/15/08 1:37	II080811-3	99.76186		102.56	mg/L	102.8	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	99.76186	2.6	119.14	mg/L	116.8	85	115			MA
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	99.76186	2.6	117.26	mg/L	114.9	85	115	1.59	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249308													
WG249308PBW	PBW	08/02/08 14:30				U	mg/L		-20	20			
WG249308LCSW	LCSW	08/02/08 14:31	PCN30200	260		276	mg/L	106.2	80	120			
L70912-01DUP	DUP	08/02/08 14:59			440	426	mg/L				3.2	20	
WG249359													
WG249359PBW	PBW	08/04/08 13:40				U	mg/L		-20	20			
WG249359LCSW	LCSW	08/04/08 13:41	PCN30200	260		274	mg/L	105.4	80	120			
L70915-02DUP	DUP	08/04/08 14:09			3790	3796	mg/L				0.2	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535ICV	ICV	08/08/08 7:22	MS080722-4	.05		.05182	mg/L	103.6	90	110			
WG249535ICB	ICB	08/08/08 7:28				.00011	mg/L		-0.0003	0.0003			
WG249535LFB	LFB	08/08/08 7:40	MS080805-4	.05		.05164	mg/L	103.3	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1	.0013	.10824	mg/L	106.9	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1	.0013	.11116	mg/L	109.9	70	130	2.66	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

Project ID: OJ06DZ

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995 CV	ICV	08/15/08 1:18	II080717-3	100		100.4	mg/L	100.4	95	105			
WG249995 CV	ICV	08/15/08 1:18	II080717-3	100		101.37	mg/L	101.4	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.9	0.9			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-6	6			
WG249995 LFB	LFB	08/15/08 1:37	II080811-3	98.21624		101.72	mg/L	103.6	85	115			
WG249995 LFB	LFB	08/15/08 1:37	II080811-3	98.21624		101.2	mg/L	103	85	115			
L70888-08AS	AS	08/15/08 2:35	II080811-3	98.21624	367	454.77	mg/L	89.4	85	115			
L70888-08ASD	ASD	08/15/08 2:39	II080811-3	98.21624	367	463.53	mg/L	98.3	85	115	1.91	20	

Sulfate

SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249485													
WG249485 PBW	PBW	08/06/08 9:45				12	mg/L		-30	30			
WG249485 LCSW	LCSW	08/06/08 9:49	WC080514-1	100		115	mg/L	115	80	120			
L70901-05DUP	DUP	08/06/08 11:20			1550	1490	mg/L				3.9	20	
WG249574													
WG249574 PBW	PBW	08/07/08 10:15				U	mg/L		-30	30			
WG249574 LCSW	LCSW	08/07/08 10:18	WC080514-1	100		99	mg/L	99	80	120			
L70901-07DUP	DUP	08/07/08 11:02			U	U	mg/L				0	20	RA

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535 CV	ICV	08/08/08 7:22	MS080722-4	.05		.05342	mg/L	106.8	90	110			
WG249535 CB	ICB	08/08/08 7:28				.0002	mg/L		-0.0003	0.0003			
WG249535 LFB	LFB	08/08/08 7:40	MS080805-4	.0501		.05075	mg/L	101.3	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1002	U	.10202	mg/L	101.8	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1002	U	.10268	mg/L	102.5	70	130	0.64	20	

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535 CV	ICV	08/08/08 7:22	MS080722-4	.05		.05117	mg/L	102.3	90	110			
WG249535 CB	ICB	08/08/08 7:28				.00015	mg/L		-0.0003	0.0003			
WG249535 LFB	LFB	08/08/08 7:40	MS080805-4	.05		.05042	mg/L	100.8	85	115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.1	.0291	.13584	mg/L	106.7	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1	.0291	.13708	mg/L	108	70	130	0.91	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG250065													
WG250065 CV	ICV	08/15/08 13:04	II080717-3	2		2.004	mg/L	100.2	95	105			
WG250065 CB	ICB	08/15/08 13:08				U	mg/L		-0.03	0.03			
WG250065 LFB	LFB	08/15/08 13:21	II080811-3	.5		.502	mg/L	100.4	85	115			
L70896-01AS	AS	08/15/08 14:11	II080811-3	.5	U	.469	mg/L	93.8	85	115			
L70896-01ASD	ASD	08/15/08 14:14	II080811-3	.5	U	.465	mg/L	93	85	115	0.86	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L70901

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70901-01	WG249995	Potassium, 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.
	WG249462	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).
	WG249724	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70901-02	WG249995	Potassium, 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.
	WG249462	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).
	WG249724	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70901-03	WG249995	Potassium, 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.
	WG249462	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).
	WG249724	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70901-04	WG249995	Potassium, 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.
	WG249462	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).
	WG249724	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70901-05	WG249995	Potassium, 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.
	WG249462	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).
	WG249724	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: L70901

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70901-06	WG249995	Potassium, 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.
	WG249462	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).
	WG249724	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).
	WG249574	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L70901-07	WG249995	Potassium, 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.
	WG249552	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).
	WG249724	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).
	WG249574	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).
	WG249346	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L70901**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70901
 Date Received: 8/1/2008
 Received By:
 Date Printed: 8/1/2008

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)

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2154	2.1	15

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

Notes

FMI Gold & Copper - Sierrita
 OJ06DZ

ACZ Project ID: L70901
 Date Received: 8/1/2008
 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
L70901-01	IW-11		Y		Y							<input type="checkbox"/>
L70901-02	IW-21		Y		Y							<input type="checkbox"/>
L70901-03	MH-11		Y		Y							<input type="checkbox"/>
L70901-04	MH-12		Y		Y							<input type="checkbox"/>
L70901-05	MH-10		Y		Y							<input type="checkbox"/>
L70901-06	EB073108A		Y		Y							<input type="checkbox"/>
L70901-07	TB073108A		Y		Y							<input type="checkbox"/>

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: _____

APPENDIX C

HYDRO GEO CHEM, INC. GROUNDWATER SAMPLING FORMS



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-7-08
Well ID:	CC of GV	Weather:	Clear
ADWR No.	501760	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	855	Time:	12:04
Casing Diameter (in):	16"	Point of Measurement:	TOC
Static Water Level (ft bmp):	261.09	GPS:	See file
1 Casing Volume (gals):	6204	Elevation:	See file
3 Casing Volumes (gals):	18613		22 min

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
12:15	850	2550	6.58	26.0	741	clear	No	Pump on at 12:12
12:18	"	5100	6.80	24.1	747	"	"	
12:21	"	7650	6.82	23.8	751	"	"	
12:25	"	11,050	6.88	23.7	744	"	"	
12:29	"	14,450	6.92	23.7	739	"	"	
12:34	"	18,700	6.97	23.7	736	"	"	
Total Discharge = 20,400 gal								

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CC of GV-F	12:36	Plastic	250 ml	1	EPA 300.0	None	Filtered
CC of GV	12:36	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well has been off for 72 hrs. prior to w/ measure and sampling.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-1-08
Well ID:	CW-3	Weather:	Partly cloudy
ADWR No.	627483	Collected By:	MA & JV

WELL DATA

Well Depth (ft bis):	501'	Time:	0840
Casing Diameter (in):	16"	Point of Measurement:	TOC
Static Water Level (ft bmp):	270.95	GPS:	see file
1 Casing Volume (gals):	2403	Elevation:	see file
3 Casing Volumes (gals):	7209 60 min		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
09:19	125	250	7.42	25.5	496	light brown	no	
09:24	825	875	7.56	25.7	490	"	no	
09:29	125	1500	7.57	25.8	498	"	"	
09:34	125	2125	7.58	25.8	484	almost clear	"	
09:39	100	2625	7.57	25.8	486	"	"	
09:48	100	3525	7.58	25.8	484	tan	"	
09:55	100	4225	7.58	"	483	clear	"	
10:05	100	5225	7.56	"	485	clear	"	
10:15	100	6225	7.55	"	484	"	"	
10:25	100	7225	7.53	25.7	484	"	"	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-3F	10:30	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-3	10:30	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments:



SAMPLE INFORMATION							
Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-6F	10:30	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-6	10:30	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well was off for 8 hrs prior to w/l measure.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-8-08
Well ID:	CW-7	Weather:	Cloudy
ADWR No.	502546	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	1065'	Time:	12:50
Casing Diameter (in):	16"	Point of Measurement:	TOL
Static Water Level (ft bmp):	428.40	GPS:	See File
1 Casing Volume (gals):	6649	Elevation:	See File
3 Casing Volumes (gals):	19947 17min		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
1302	1200	2400	7.06	28.1	796	Rust	No	Pump on at 1300
1305	3600 3600	3600	7.11	27.8	1993	"	"	Some sediment
1308	1200	9600	7.12	27.8	2026	clear	No	
1312	"	14400	7.15	27.8	2013	"	"	
1316	"	19200	7.11	27.9	2032	"	"	
Total Discharge 21,600 gal								

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-7F	1318	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-7	1318	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well has not been run since 2Q

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-8-08
Well ID:	DUP-070808(CW-7)	Weather:	Cloudy
ADWR No.	502546	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	1065	Time:	12:50
Casing Diameter (in):	16"	Point of Measurement:	TOC
Static Water Level (ft bmp):	428.40	GPS:	See File
1 Casing Volume (gals):	6649	Elevation:	See File
3 Casing Volumes (gals):	19947		

FIELD SAMPLING DATA

[illegible]

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
DUP-070808	1320	Plastic	250 ml	1	EPA 300.0	None	Filtered
DUP-070808	1320	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments:

Collected at CW-7

QA/QL Sample

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-8-08
Well ID:	FB / EQB (CW-7)	Weather:	Cloudy
ADWR No.	502546	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bis):	NA	Time:	1321
Casing Diameter (in):	NA	Point of Measurement:	NA
Static Water Level (ft bmp):	NA	GPS:	NA
1 Casing Volume (gals):	NA	Elevation:	NA
3 Casing Volumes (gals):			

FIELD SAMPLING DATA

[illegible]

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
EQB-070808	1320	Plastic	250 ml	1	EPA 300.0	None	Filtered
FR-070808	1320	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments:

Collected at CW-7

QA/QL sample



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-8-08
Well ID:	CW-8	Weather:	cloudy
ADWR No.	543600	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	1200'	Time:	12:00
Casing Diameter (in):	24"	Point of Measurement:	TOC
Static Water Level (ft bmp):	341.75	GPS:	See File
1 Casing Volume (gals):	20187	Elevation:	See File
3 Casing Volumes (gals):	60561 32min		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
1203	1900	5700	7.19	30.8	1127	clear	yes yes	Pump on at 12:00
1207	11	13300	7.37	30.4	1198	11	11	
1211	11	20900	7.35	30.3	1260	11	11	
1215	11	28500	7.37	29.9	1307	11	No	
1220	11	38000	7.37	30.0	1339	11	11	
1225	11	47500	7.36	29.9	1354	11	11	
1230	11	57000	7.40	29.8	1373	11	11	
Total Discharge					62700 gal			

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-8F	12:33	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-8	12:33	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments:

This well has not been run since 2Q



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-8-08
Well ID:	CW-9	Weather:	Clear
ADWR No.	588121	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bis):	1000'	Time:	10:57
Casing Diameter (in):	20"	Point of Measurement:	TOL
Static Water Level (ft bmp):	315.60	GPS:	See file
1 Casing Volume (gals):	11179	Elevation:	See file
3 Casing Volumes (gals):	33538		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
1105	1000	6000	7.16	28.1	386	Clear	No	Pump on 10:57
1108	11	9000	7.14	28.0	389	"	"	
1112	"	13,000	7.25	28.0	394	"	"	
1116	"	17,000	7.24	27.9	394	"	"	
1120	"	21,000	7.21	27.9	391	"	"	
1124	"	25,000	7.22	27.9	393	"	"	
1128	"	29,000	7.18	27.9	394	"	"	
1132	"	33,000	7.26	27.9	396	"	"	
Total Discharge 36,000 gal								

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-9F	11:35	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-9	11:35	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well was off for approx 8-9 hrs prior to
w/ measure



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-8-08
Weil ID:	CW-10	Weather:	cloudy
ADWR No.	207982	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bis):	1140'	Time:	8:55
Casing Diameter (in):	16"	Point of Measurement:	TOC
Static Water Level (ft bmp):	203.25	GPS:	See file
1 Casing Volume (gals):	9784	Elevation:	See file
3 Casing Volumes (gals):	29352		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
9:26	1500	3000	6.82	29.5	378	Clear	No	Pump on at 9:24
9:30	"	9000	7.15	30.7	367	"	"	
9:34	"	15000	7.27	31.1	376	"	"	
9:38	"	21000	7.31	31.0	380	"	"	
9:42	"	27000	7.34	31.2	385	"	"	
9:45	"	31500	7.34	31.2	385	"	"	
Total Discharge 34500 gal								

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-10-F	9:47	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-10	9:47	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well shut off this morning at 5:30



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-7-08
Well ID:	GV-01-GVDWID	Weather:	clear
ADWR No.	603428	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	645	Time:	8:22
Casing Diameter (in):	16"	Point of Measurement:	TOC
Static Water Level (ft bmp):	231.00	GPS:	See file
1 Casing Volume (gals):	4324	Elevation:	See file
3 Casing Volumes (gals):	12972 19 min		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
0832	700	700	6.65	26.8	445	clear	No	Pump on at 8:31
0835	"	2800	7.04	26.2	456	"	"	
0838	"	4900	7.13	26.2	458	"	"	
0841	"	6060	7.15	26.1	465	"	"	
0844	"	8100	7.23	26.0	466			
0847	"	10,200	7.17	26.0	466			
0851	"	12,300	7.14	26.1	466			
Total Discharge					15,400 gal			

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
GV-01-GVDWID-A 0853		Plastic	250 ml	1	EPA 300.0	None	Filtered
GV-01-GVDWID 0853		Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments:

This well was off for approx 16 hrs prior to w/ measure and sampling



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-7-08
Well ID:	GV-02-GVDWID	Weather:	Clear
ADWR No.	603429	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	560'	Time:	9:15
Casing Diameter (in):	16"	Point of Measurement:	TOC
Static Water Level (ft bmp):	201.05	GPS:	See File
1 Casing Volume (gals):	3749.6	Elevation:	See File
3 Casing Volumes (gals):	11250 16min		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
0926	730	1460	6.96	24.9	641	Clear	No	Pump on 9:24
0929	3650	3650	6.96	24.1	640	"	"	
0931	730	5840	7.08	23.9	640	"	"	
0934	"	7300	7.11	23.9	640	"	"	
0937	"	9490	7.14	23.9	642	"	"	
0939	"	10950	7.12	23.8	642	"	"	
Total Discharge 12,410 gal								

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
GV-02-GVDWID-F	9:41	Plastic	250 ml	1	EPA 300.0	None	Filtered
GV-02-GVDWID	9:41	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well was off for approx 17 hrs prior to measuring w/ and sampling.



WELL DATA	
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FIELD SAMPLING DATA

SAMPLE INFORMATION	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
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23	24
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59	60
61	62
63	64
65	66
67	68
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71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

11. 11. 1954

This well is running. See 10:00 am note in fieldbook



WELL DATA	
Well Depth (ft bis):	500'
Casing Diameter (in):	14"
Static Water Level (ft bmp):	NA
1 Casing Volume (gals):	NA
3 Casing Volumes (gals):	
Time:	13:10
Point of Measurement:	NA
GPS:	See file
Elevation:	See file

[illegible]

SAMPLE INFORMATION							
Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
HAVEN GOLF-F	13:35	Plastic	250 ml	1	EPA 300.0	None	Filtered
HAVEN GOLF	13:35	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: This well was not running on arrival. I cannot measure
w/ as there is an obstruction.

**HYDRO GEO CHEM, INC.****Groundwater Sampling Form**

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-11-08
Well ID:	NP-2	Weather:	Mostly Sunny - Very sticky
ADWR No.	605898	Collected By:	MA & JV

WELL DATA

Well Depth (ft bis):	515	Time:	12:20
Casing Diameter (in):	12"	Point of Measurement:	TOC
Static Water Level (ft bmp):	355.10	GPS:	on file
1 Casing Volume (gals):	940	Elevation:	on file
3 Casing Volumes (gals):	2820		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
1234	90	180	7.83	25.6	459	Clear	NO	pump on 12:32
1239	90	630	7.87	25.4	456	"	"	
1244	75	1005	7.77	25.6	459	"	"	
1249	75	1880	7.75	"	456	"	"	
1254	75	1755	7.75	25.7	458	"	"	
1259	75	2130	7.69	25.7	457	"	"	
1304	60	2430	7.64	25.9	457	"	"	
1310	60	2820	7.62	25.9	455	"	"	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
NP2F	13:15	Plastic	250 ml	1	EPA 300.0	None	Filtered
NP2	13:15	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments:



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No.	7830000	Client:	Freeport-McMoRan Sierrita Inc.
Task No.	6.2	Date:	7-9-08
Well ID:	TMM-1	Weather:	Cloudy
ADWR No.	616156	Collected By:	M. Arneson

WELL DATA

Well Depth (ft bls):	500'	Time:	9:30
Casing Diameter (in):	10"	Point of Measurement:	TOL
Static Water Level (ft bmp):	437.37	GPS:	See File
1 Casing Volume (gals):	255	Elevation:	See File
3 Casing Volumes (gals):	766.6		

FIELD SAMPLING DATA

Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
9:54	6	6	7.69	25.7	323	Clear	NO	Pump on at 9:53
9:56	6	18	8.06	24.7	279	"	"	
9:58	6	30	8.11	24.7	306	"	"	
10:00	6	42	8.19	25.0	309	"	"	
10:02	Flow dropped < 1 gpm Allow Recovery							
10:46	6	60	8.07	25.0	300	"	"	
10:47	6	66	7.94	22.3	296	"	"	
Total Discharge 72 gal								

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
TMM-1F	10:48	Plastic	250 ml	1	EPA 300.0	None	Filtered
TMM-1	10:48	Plastic	250 ml	1	EPA 300.0	None	Unfiltered

Additional Comments: Well pumped dry after approx 50-52 gal.
Allowed to recharge for 45 min

APPENDIX D

TIME SERIES GRAPHS OF SULFATE CONCENTRATION AND GROUNDWATER ELEVATION

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- D.3 Sulfate Concentration and Groundwater Elevation Over Time for Wells ESP-1, ESP-2, ESP-3, and ESP-4
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TABLE D.1
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION DATA

Well ID	Date	Groundwater Elevation (ft amsl)	Sulfate (mg/L)
CW-6	12/04/06	2607.50	46.2
CW-6	01/03/07	2622.00	49.2
CW-6	05/14/07	2614.75	68.7
CW-6	07/10/07	2614.85	57.6
CW-6	10/02/07	2613.95	54.2
CW-6	01/08/08	2621.19	48.9
CW-6	04/15/08	2612.80	51.2
CW-6	07/08/08	2613.20	47.9
CW-7	01/03/07	2562.50	807
CW-7	05/14/07	2563.35	874
CW-7	07/10/07	2561.00	860
CW-7	10/02/07	2559.90	940
CW-7	01/08/08	2560.00	1080
CW-7	04/15/08	2561.10	900
CW-7	07/08/08	2559.10	890
CW-8	01/24/07	2621.00	449
CW-8	05/14/07	2619.36	529
CW-8	07/10/07	2617.70	500
CW-8	10/02/07	2616.90	463
CW-8	01/08/08	2619.53	466
CW-8	04/15/08	2618.30	441
CW-8	07/08/08	2615.75	504
CW-9	12/04/06	2528.30	44.5
CW-9	01/03/07	2530.10	44.9
CW-9	05/14/07	2524.90	47.8
CW-9	07/10/07	2524.10	46.7
CW-9	10/02/07	2523.60	46.4
CW-9	01/08/08	2525.48	47.3
CW-9	04/15/08	2526.30	43.7
CW-9	07/08/08	2518.70	44.1
CW-10	12/04/06	2681.75	37.2
CW-10	01/24/07	2691.30	48.6
CW-10	05/14/07	2672.20	52.8
CW-10	07/10/07	2669.71	51.7
CW-10	10/02/07	2677.65	47.7
CW-10	01/08/08	2687.55	45.3
CW-10	04/15/08	2680.55	50.8
CW-10	07/08/08	2665.25	50.5
GV-1-GVDWID	08/06/06	NM	41.2
GV-1-GVDWID	01/09/07	2721.35	40.9
GV-1-GVDWID	04/10/07	2724.49	43.2
GV-1-GVDWID	07/11/07	2711.35	41.5
GV-1-GVDWID	10/03/07	NM	43.8
GV-1-GVDWID	01/07/08	2720.85	45.7
GV-1-GVDWID	04/16/08	2716.85	44.1
GV-1-GVDWID	07/07/08	2711.35	45.2
GV-2-GVDWID	08/06/06	NM	48.6
GV-2-GVDWID	10/04/06	NM	95.3
GV-2-GVDWID	01/09/07	2745.17	103
GV-2-GVDWID	04/10/07	2743.50	106
GV-2-GVDWID	07/11/07	2730.02	98
GV-2-GVDWID	10/03/07	2731.15	100
GV-2-GVDWID	01/07/08	2739.85	98
GV-2-GVDWID	04/16/08	2735.52	97
GV-2-GVDWID	07/07/08	2729.42	93.2
GV-SI GVDWID	10/04/06	NM	5.9
GV-SI GVDWID	01/09/07	2805.47	5.7
GV-SI GVDWID	04/10/07	2804.25	6.6
GV-SI GVDWID	07/11/07	2802.34	6.9
GV-SI GVDWID	10/03/07	2798.26	6.5
GV-SI GVDWID	01/07/08	2804.90	8
GV-SI GVDWID	04/16/08	2795.10	2
GV-SI GVDWID	08/14/08	2797.15	<0.5
ESP-1	12/04/06	2599.68	262
ESP-1	01/03/07	2597.78	242
ESP-1	05/14/07	2598.33	113
ESP-1	07/10/07	2603.76	94
ESP-1	10/12/07	2610.43	110
ESP-1	01/23/08	NM	100
ESP-1	04/18/08	NM	102
ESP-1	07/25/08	NM	104

TABLE D.1
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION DATA

Well ID	Date	Groundwater Elevation (ft amsl)	Sulfate (mg/L)
ESP-2	12/04/06	2589.06	29.6
ESP-2	01/03/07	2580.51	31.3
ESP-2	05/14/07	2583.71	28.4
ESP-2	07/10/07	2593.35	28.6
ESP-2	10/12/07	2592.34	30
ESP-2	01/23/08	2594.20	30
ESP-2	04/18/08	2593.67	27.6
ESP-2	07/25/08	2592.30	26.8
ESP-3	12/04/06	2572.41	36.2
ESP-3	01/03/07	2573.59	37.5
ESP-3	05/14/07	2576.34	36.6
ESP-3	07/10/07	2577.75	36.6
ESP-3	10/12/07	NM	40
ESP-3	01/23/08	NM	30
ESP-3	04/18/08	NM	35.7
ESP-3	07/25/08	NM	34
ESP-4	03/20/07	2606.02	393
ESP-4	05/14/07	2608.71	385
ESP-4	07/10/07	2609.80	410
ESP-4	10/12/07	2606.19	360
ESP-4	01/23/08	2608.95	520
ESP-4	04/18/08	2608.21	451
ESP-4	07/25/08	2606.47	420
MO-2007-1A	08/08/07	2541.28	19.2
MO-2007-1A	10/09/07	2538.83	20
MO-2007-1A	01/24/08	2541.33	20
MO-2007-1A	04/09/08	2542.93	21
MO-2007-1A	07/14/08	2539.23	16.6
MO-2007-1B	08/02/07	2540.68	18.9
MO-2007-1B	10/09/07	2537.15	30
MO-2007-1B	01/24/08	2540.41	30
MO-2007-1B	04/09/08	2541.77	35
MO-2007-1B	07/14/08	2537.84	39.8
MO-2007-1C	07/31/07	2540.47	112
MO-2007-1C	10/09/07	2537.32	90
MO-2007-1C	01/24/08	2544.58	140
MO-2007-1C	04/09/08	2545.28	149
MO-2007-1C	07/14/08	2541.85	165
MO-2007-2	06/14/07	2578.59	591
MO-2007-2	08/09/07	2578.31	520
MO-2007-2	10/09/07	2577.01	560
MO-2007-2	01/22/08	2576.61	530
MO-2007-2	04/17/08	2577.18	473
MO-2007-2	07/14/08	2576.48	472
NP-2	06/04/07	2554.78	41.2
NP-2	08/13/07	2555.05	41.7
NP-2	11/06/07	2551.46	41.7
NP-2	01/11/08	2552.89	43.5
NP-2	04/17/08	2554.36	40
NP-2	07/11/08	2551.46	40.5
MO-2007-3B	09/10/07	2551.37	38
MO-2007-3B	10/09/07	2551.20	40
MO-2007-3B	01/21/08	2555.02	40
MO-2007-3B	04/16/08	2555.05	37
MO-2007-3B	07/14/08	2553.44	37.8
MO-2007-3C	07/05/07	2553.79	136
MO-2007-3C	10/10/07	2550.24	110
MO-2007-3C	01/21/08	2555.16	130
MO-2007-3C	04/15/08	2554.72	127
MO-2007-3C	07/14/08	2552.06	126
MO-2007-4A	10/09/07	2615.80	37
MO-2007-4A	01/22/08	2619.78	40
MO-2007-4A	04/16/08	2618.17	33.1
MO-2007-4A	07/17/08	2615.58	34.8
MO-2007-4B	10/11/07	2614.50	37.6
MO-2007-4B	01/07/08	2619.35	60
MO-2007-4B	04/16/08	2617.09	33.6
MO-2007-4B	07/18/08	2614.62	35.5

TABLE D.1
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION DATA

Well ID	Date	Groundwater Elevation (ft amsl)	Sulfate (mg/L)
MO-2007-4C	08/16/07	2626.36	78.7
MO-2007-4C	10/12/07	2614.71	80.1
MO-2007-4C	01/22/08	2618.76	80
MO-2007-4C	04/16/08	2616.91	80
MO-2007-4C	07/18/08	2614.56	78.6
CW-3	06/06/07	2675.89	57.9
CW-3	08/10/07	2674.04	59.5
CW-3	11/06/07	2671.73	57.5
CW-3	01/11/08	2677.31	55.7
CW-3	04/15/08	2675.25	54
CW-3	07/11/08	2670.76	56.7
MO-2007-5B	10/12/07	2675.15	402
MO-2007-5B	01/07/08	2682.26	360
MO-2007-5B	04/17/08	2678.13	390
MO-2007-5B	07/24/08	2675.74	343
MO-2007-5C	08/23/07	2650.29	248
MO-2007-5C	10/13/07	2654.63	265
MO-2007-5C	01/07/08	2659.82	280
MO-2007-5C	04/17/08	2663.39	259
MO-2007-5C	07/24/08	2662.49	233
MO-2007-6A	10/02/07	2738.89	26.5
MO-2007-6A	01/22/08	2740.10	30
MO-2007-6A	04/18/08	2739.35	20.5
MO-2007-6A	07/24/08	2737.56	16.9
MO-2007-6B	10/04/07	2722.78	93.6
MO-2007-6B	01/22/08	2728.27	80
MO-2007-6B	04/17/08	2728.30	90.4
MO-2007-6B	07/24/08	2726.01	81.5
MH-28	11/14/06	2741.08	1860
MH-28	02/19/07	2741.08	1920
MH-28	04/17/07	2739.86	1920
MH-28	07/16/07	2739.00	1880
MH-28	10/11/07	2739.18	1950
MH-28	01/18/08	2739.46	1940
MH-28	04/08/08	2740.28	1900
MH-28	07/01/08	2740.70	1680
MH-29	11/14/06	2745.10	1640
MH-29	02/19/07	2746.57	1650
MH-29	04/17/07	2746.40	1690
MH-29	07/16/07	2744.08	1650
MH-29	10/11/07	2741.23	1710
MH-29	01/18/08	2742.74	1710
MH-29	04/08/08	2742.99	1700
MH-29	07/01/08	2742.65	1730

ft amsl = feet above mean sea level

mg/L = milligrams per liter

NM = Not Measured, Obstruction

FIGURE D.1
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
CW-6, CW-7, CW-8, AND CW-9

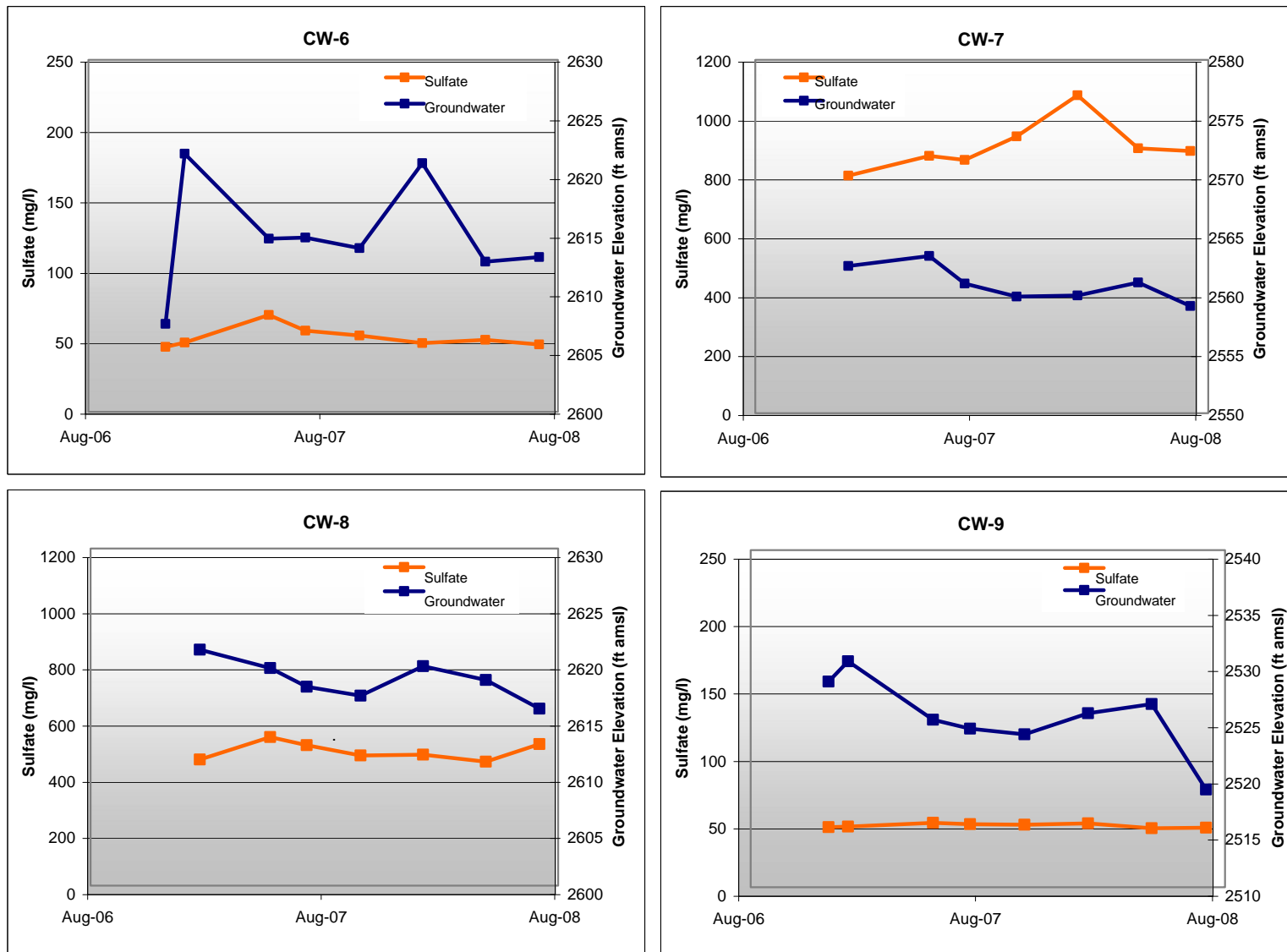


FIGURE D.2
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
CW-10, GV-1-GVDWID, GV-2-GVDWID, AND GV-SI-GVDWID

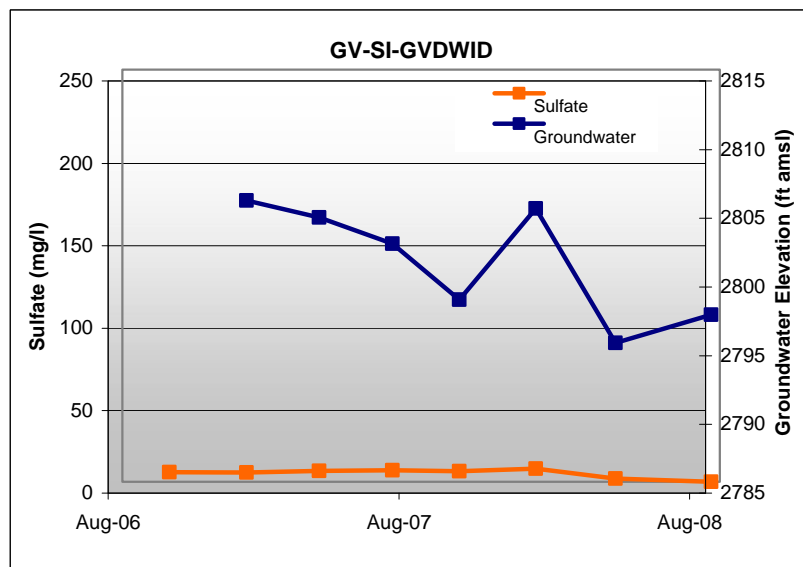
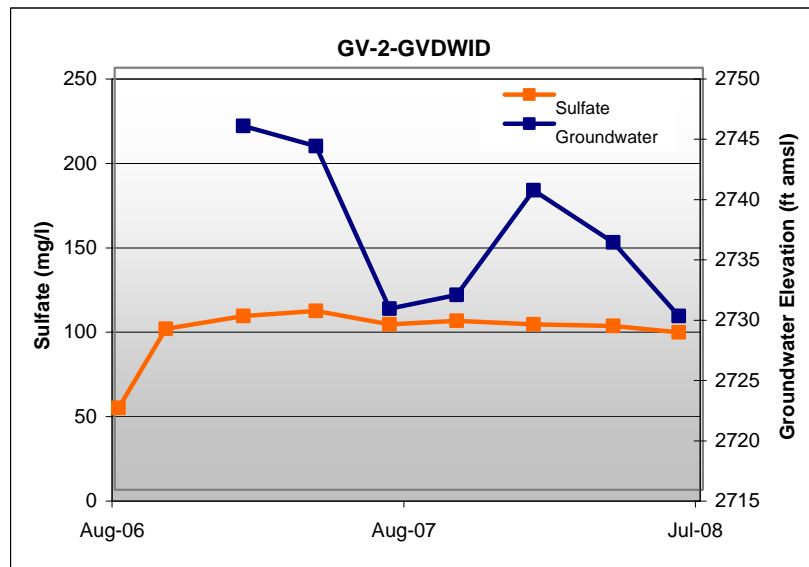
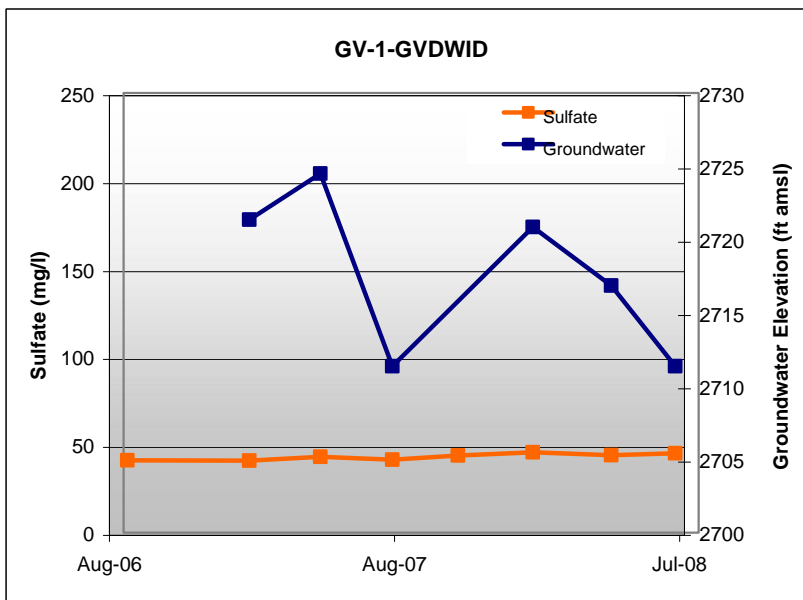
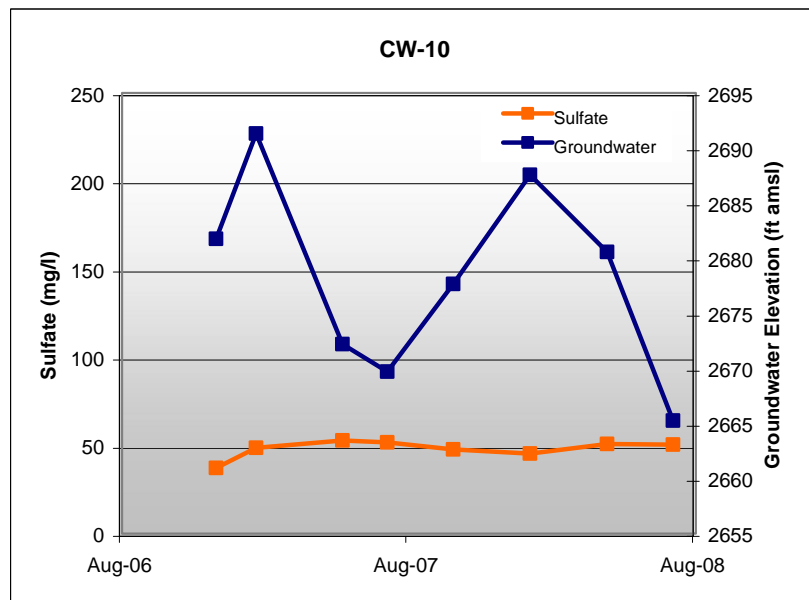


FIGURE D.3
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
ESP-1, ESP-2, ESP-3, AND ESP-4

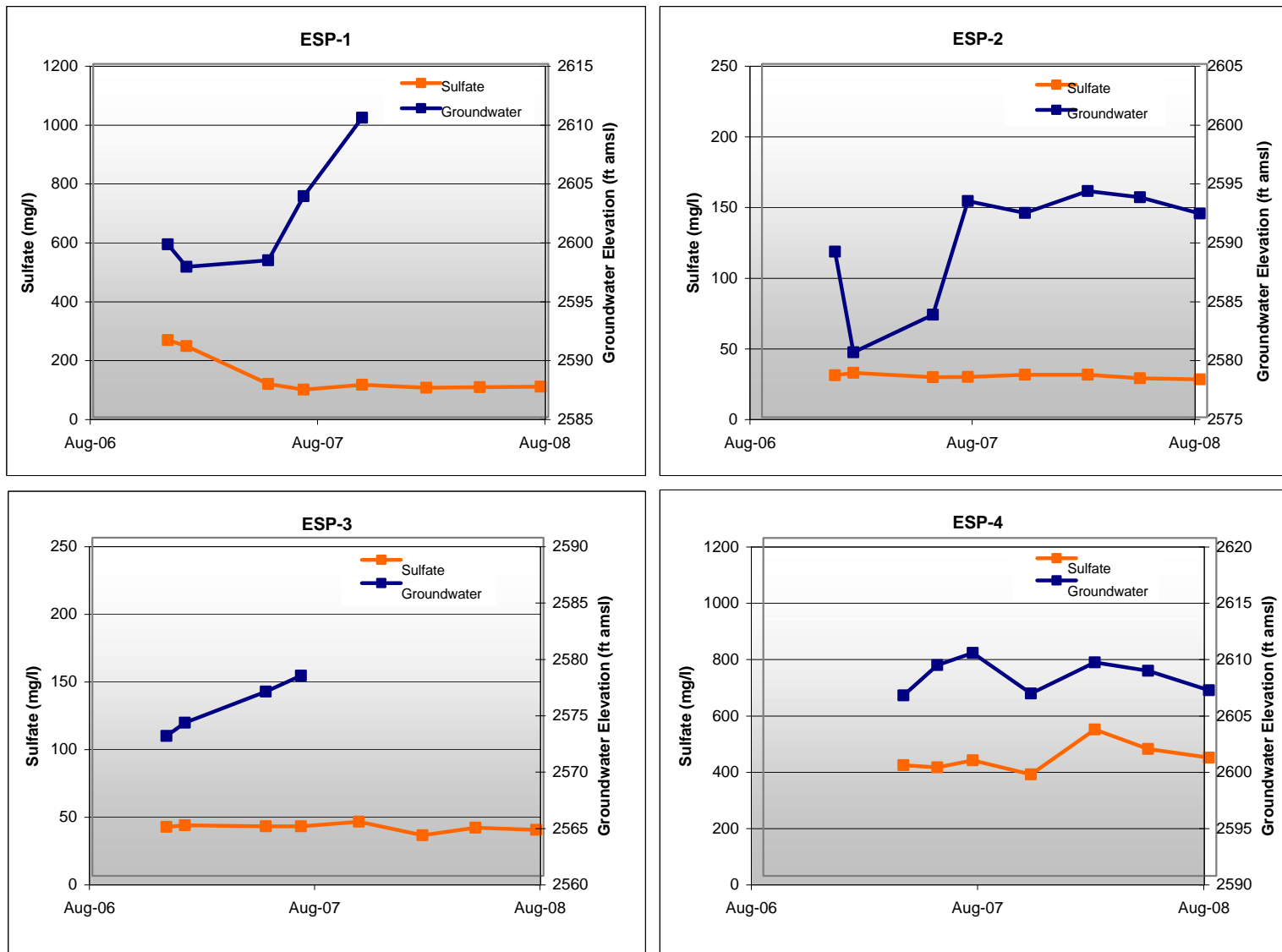


FIGURE D.4
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, MO-2007-1C, AND MO-2007-2

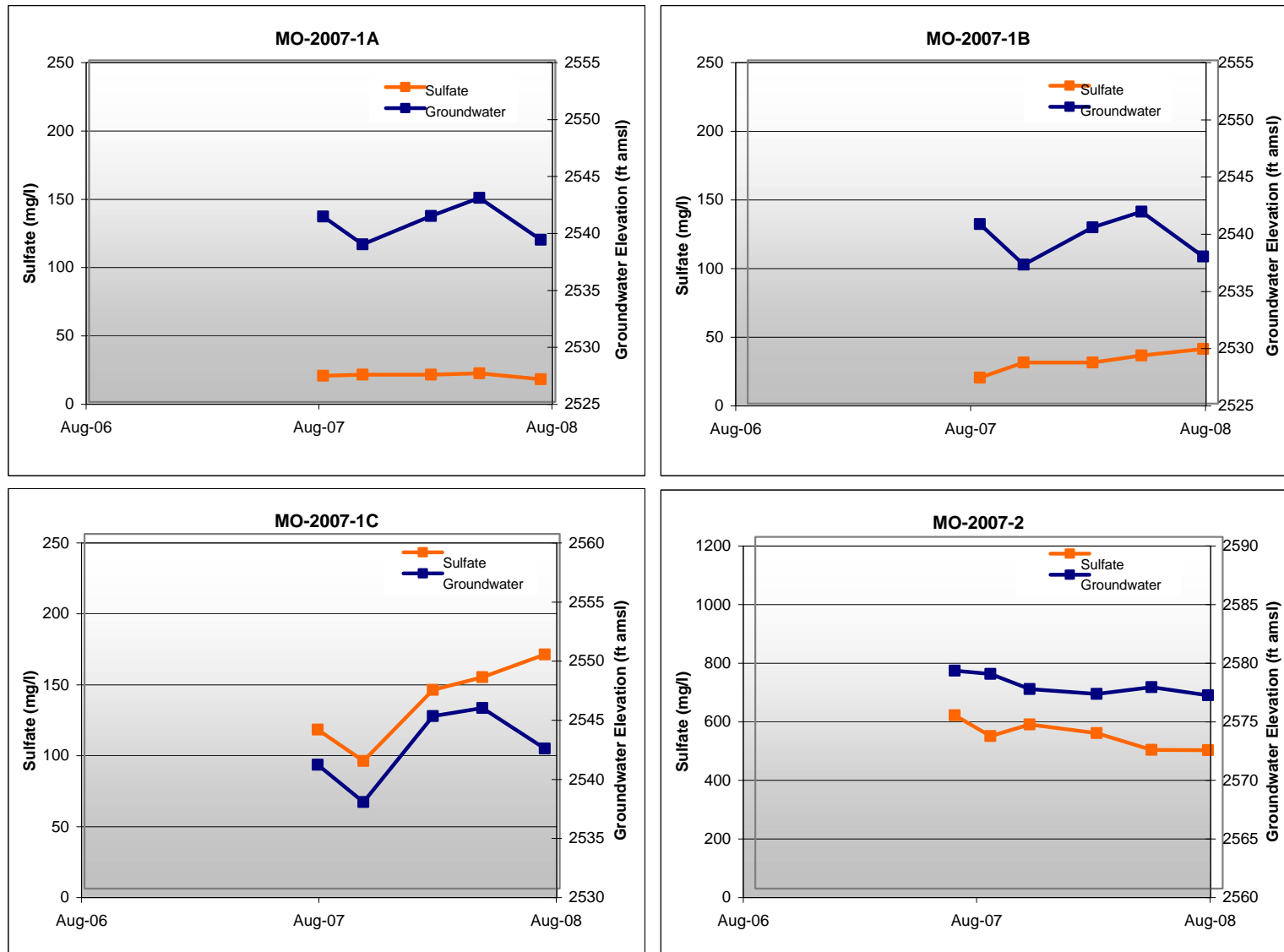


FIGURE D.5
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND MO-2007-4A

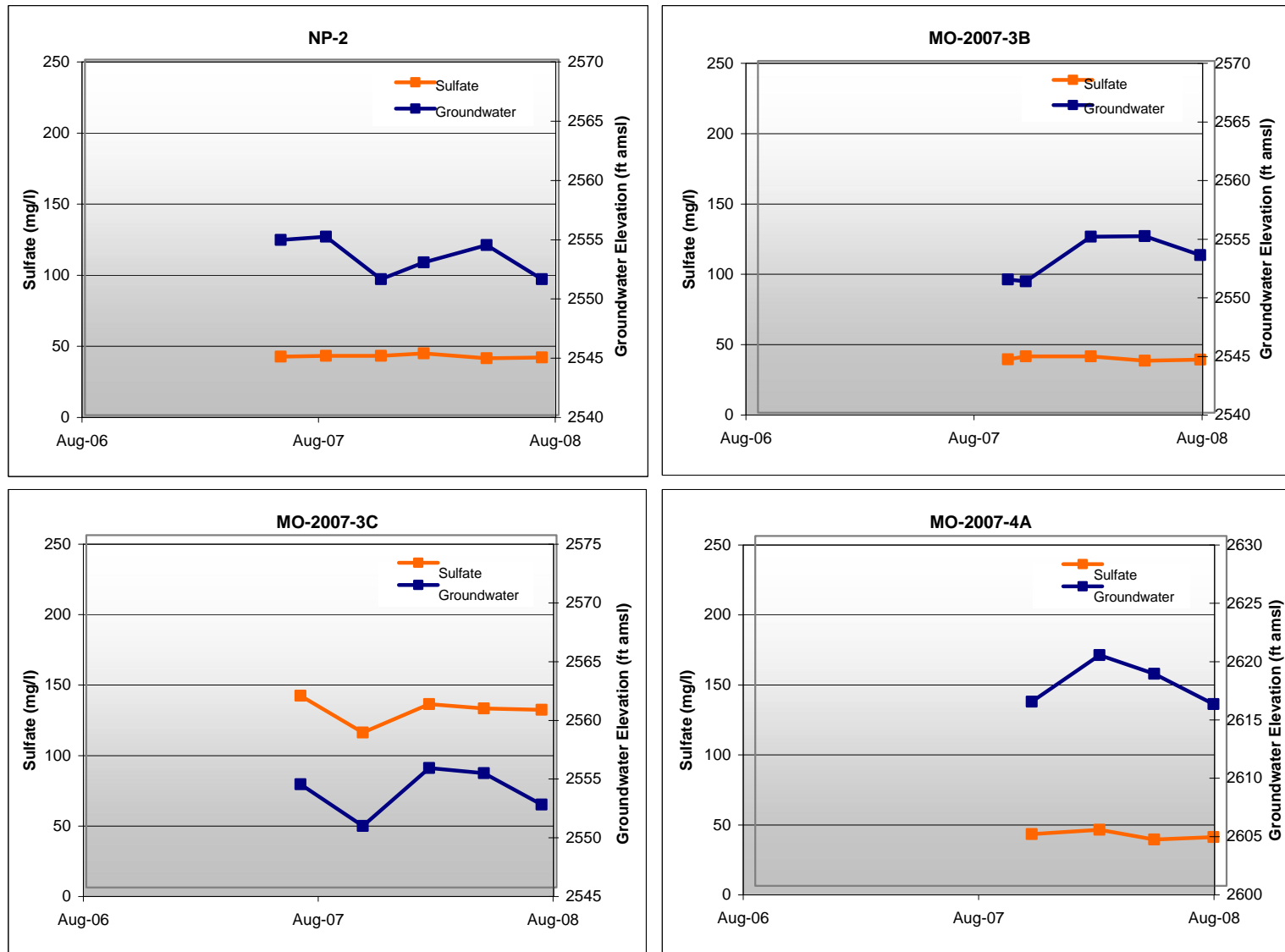


FIGURE D.6
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MO-2007-4B, MO-2007-4C, CW-3, AND MO-2007-5B

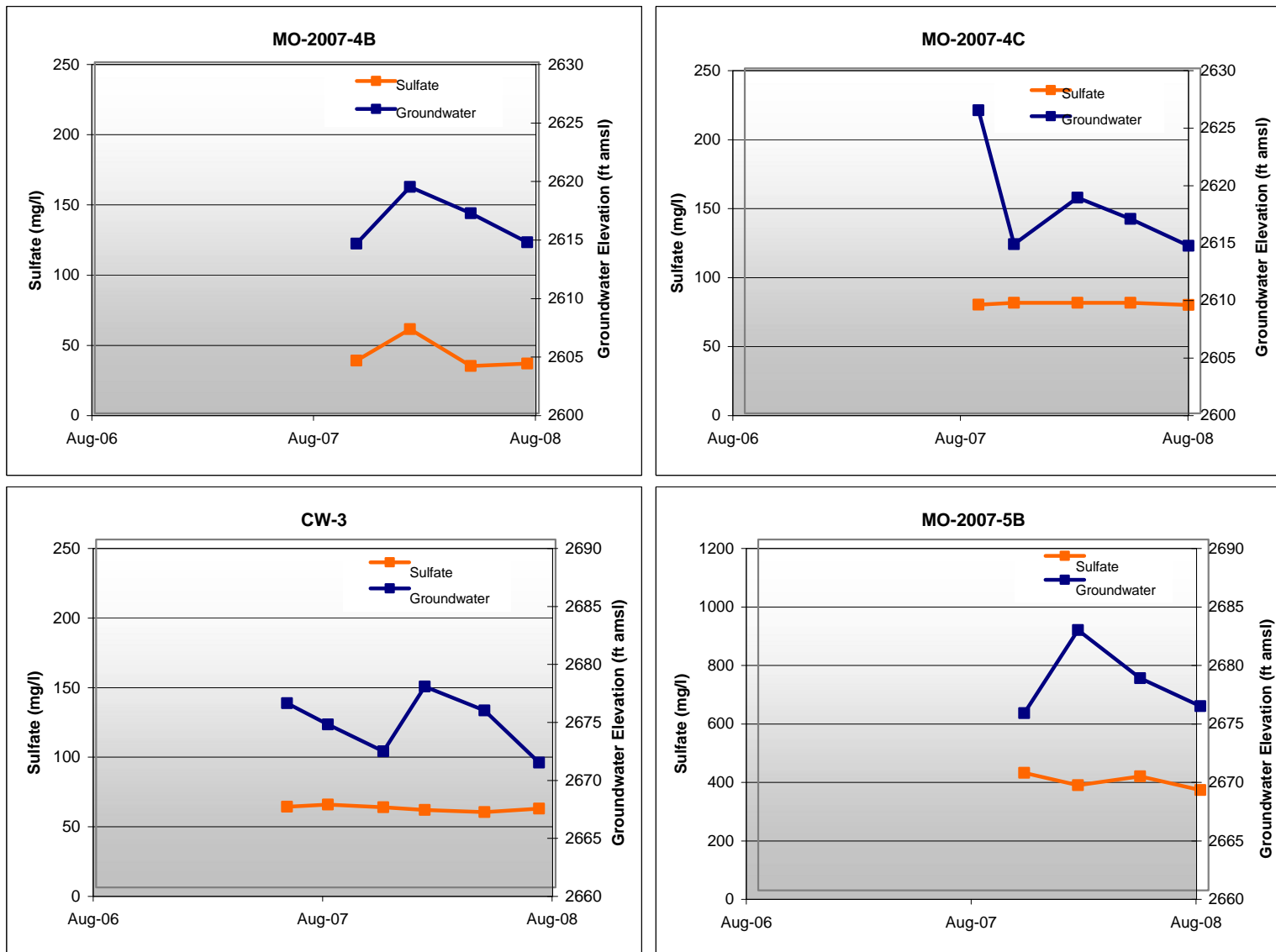


FIGURE D.7
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MO-2007-5C, MO-2007-6A, AND MO-2007-6B

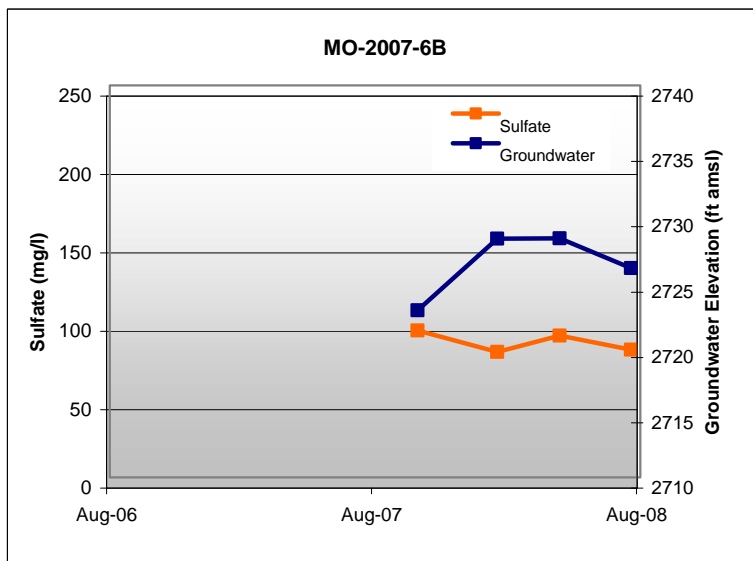
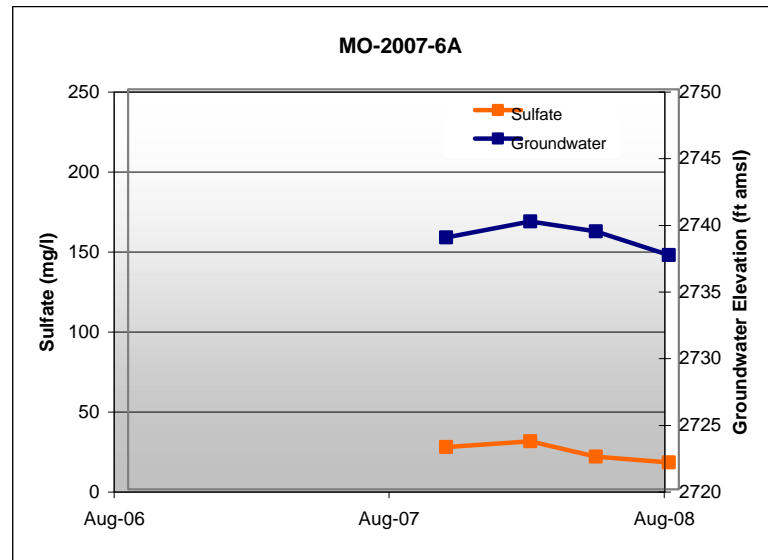
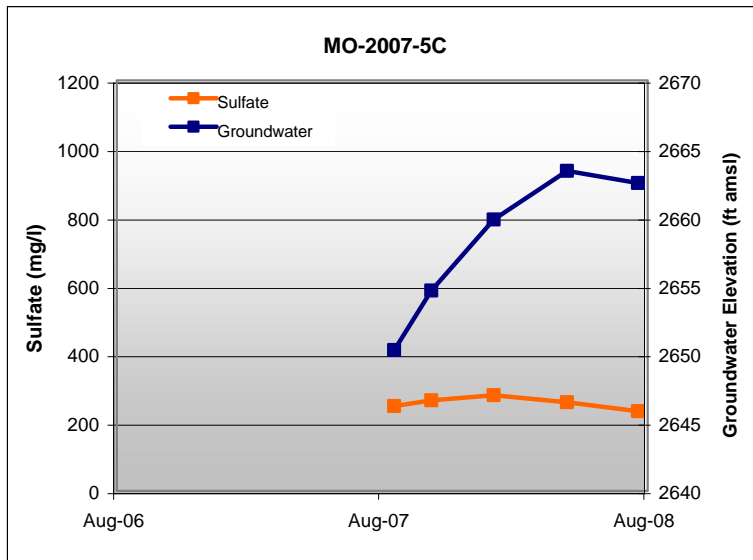


FIGURE D.8
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MH-28 AND MH-29

