

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.

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.

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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

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Expires 12/31/

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Prepared by:

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September 26, 2008

TABLE OF CONTENTS

1.	INTRODUCTION1
	1.1 Scope of Groundwater Monitoring
	1.1.1 Groundwater Monitoring for Task 2.2
2.	GROUNDWATER MONITORING RESULTS 5
	2.1 Results of Monitoring for Task 2.2
	2.2 Quality Assurance/Quality Control Review
3.	DISCUSSION7
	3.1 Sulfate Distribution
	3.2 Groundwater Elevation
	3.3 Time Series Graphs of Sulfate Concentration and Groundwater Elevation 9
4.	REFERENCES
	TABLES
1	Summary of Groundwater Monitoring for Mitigation Order Docket No. P-50-06 for Third Quarter 2008
2	Analytical Results for Third Quarter 2008 Groundwater Monitoring
3	Groundwater Elevation Data for Water Levels Collected in Third Quarter 2008
3	Groundwater Elevation Bata for water Levels Concetted in Time Quarter 2000
	FIGURES
1 2	Sulfate Concentrations in Groundwater Samples Collected in July 2008 Groundwater Elevations for July 2008
	APPENDICES
A	Third Quarter 2008 Data Verification Report for Groundwater Samples Collected By Freeport-McMoRan Sierrita Inc. and Hydro Geo Chem, Inc.
В	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
	T

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

Q3 08 Sierrita Groundwater Report.doc H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc September 26, 2008 1

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.

Q3 08 Sierrita Groundwater Report.doc
H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc

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

5

collected by Sierrita and HGC during the third quarter of 2008, and is included in Appendix A.

Q3 08 Sierrita Groundwater Report.doc H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc 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

6

characterization being conducted pursuant to the Work Plan.

Q3 08 Sierrita Groundwater Report.doc H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc September 26, 2008 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

Q3 08 Sierrita Groundwater Report.doc H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc September 26, 2008 7

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

Q3 08 Sierrita Groundwater Report.doc H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc September 26, 2008 8

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.

Q3 08 Sierrita Groundwater Report.doc H:\78300\REPORTS\Q3 08 Sierrita Groundwater Report.doc September 26, 2008

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

					Work Plan S	Specification	Q3-2008	Monitoring		
Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?	Status	Substitute Well
				WELLS F	OR QUARTERLY	[PLUME] MONITOR	RING CONTROL	LED BY SIERRIT	TA .	
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	

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

					Work Plan S	pecification	Q3-2008	Monitoring		
Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?	Status	Substitute Well
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	

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

					Work Plan S	pecification	Q3-2008	Monitoring		
Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?	Status	Substitute Well
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 [PL	UME] MONITORIN	IG NOT CONTR	OLLED BY SIERF	RITA	
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

					Work Plan S	Specification	Q3-2008	Monitoring		
Well Name	ADWR 55 Well Registry Number	Owner	Purpose	Casing or Well Depth (feet)	Water Level Measurement	Water Quality Sampling	Water Level Measured?	Water Quality Sample Collected?	Status	Substitute Well
I-9	608526	ТВРІ	Plume Monitoring	900	Q	Q	NO	NO	Well abandonment completed October 2007	None
I-10	608525	ТВРІ	Plume Monitoring	932	Q	Q	YES	YES	Water quality sample collected in July 2008	
M-6	87388	ТВРІ	Plume Monitoring	660	Q	Q	NO	NO	Well unavailable for monitoring	M-9, 55-501652
M-8	87390	ТВРІ	Plume Monitoring	660	Q	Q	YES	YES	Water quality sample collected in July 2008	
M-9	501652	ТВРІ	Plume Monitoring	440	Q	Q	YES	YES	Water quality sample collected in July 2008	55-87388
M-10	501653	ТВРІ	Plume Monitoring	1050	Q	Q	YES	YES	Water quality sample collected in July 2008	
M-20	906595	ТВРІ	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

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

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)

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 QUAR	TERLY [PLUME] MONITO	ORING CONTROLLED BY S	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 QUARTE	RLY [PLUME] MONITOR	ING NOT CONTROLLED BY	Y 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)
		V	VELLS FOR QUARTERLY	[PLUME] MONITORING C	ONTROLLED BY SIERRITA		1	-
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

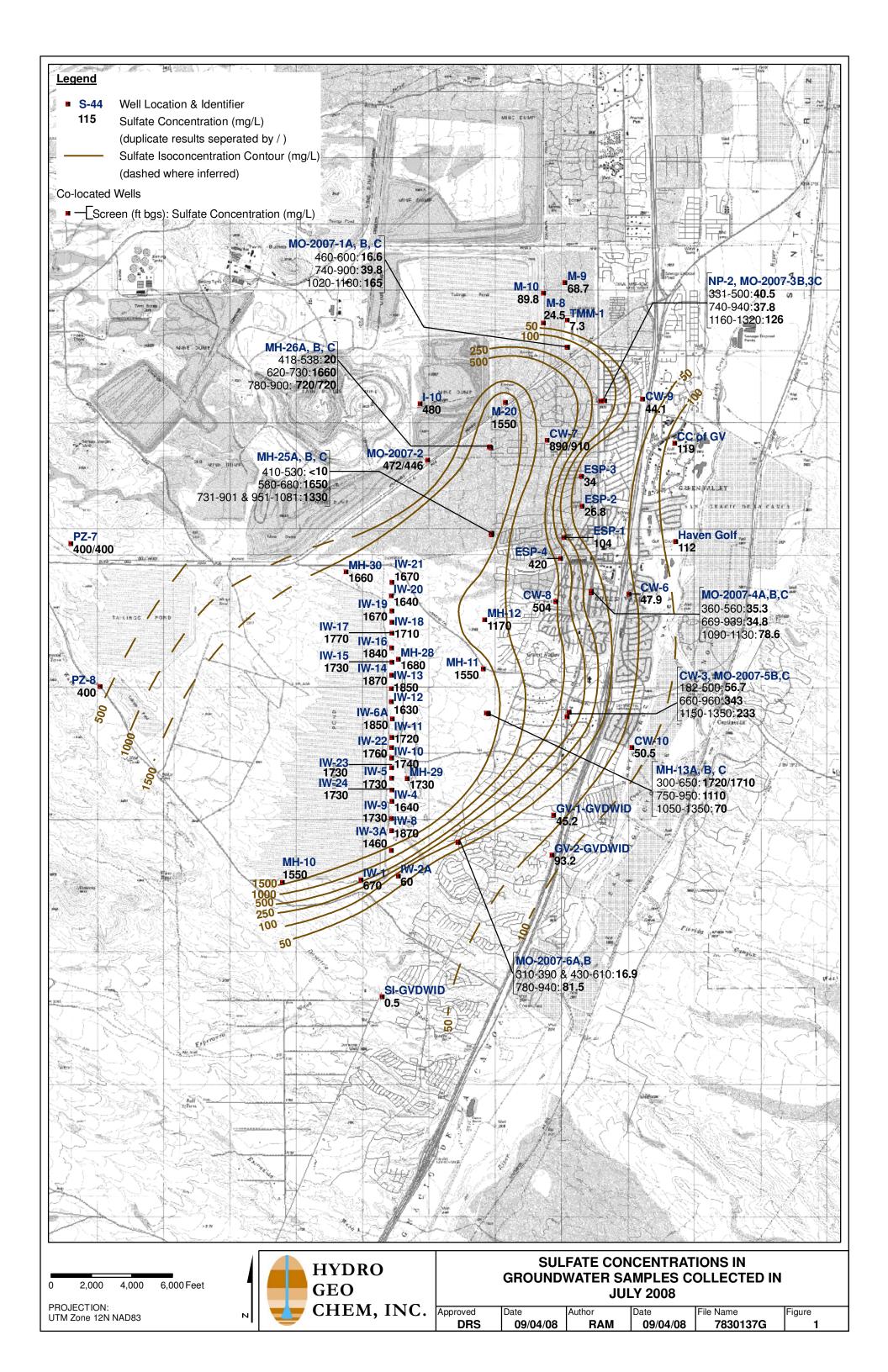
Well Name	ADWR 55 Well Registry Number	Survey Source	UTM North	UTM East	Measuring Point Elevation (ft amsl)	Date	Depth to Water (feet)	Groundwater Elevation (ft amsl)
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	07/24/08	268.61	2675.74
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	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
		WE	LLS FOR QUARTERLY [P	LUME] MONITORING NOT	CONTROLLED BY SIERR	ITA		
1350	ND	ТВРІ	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

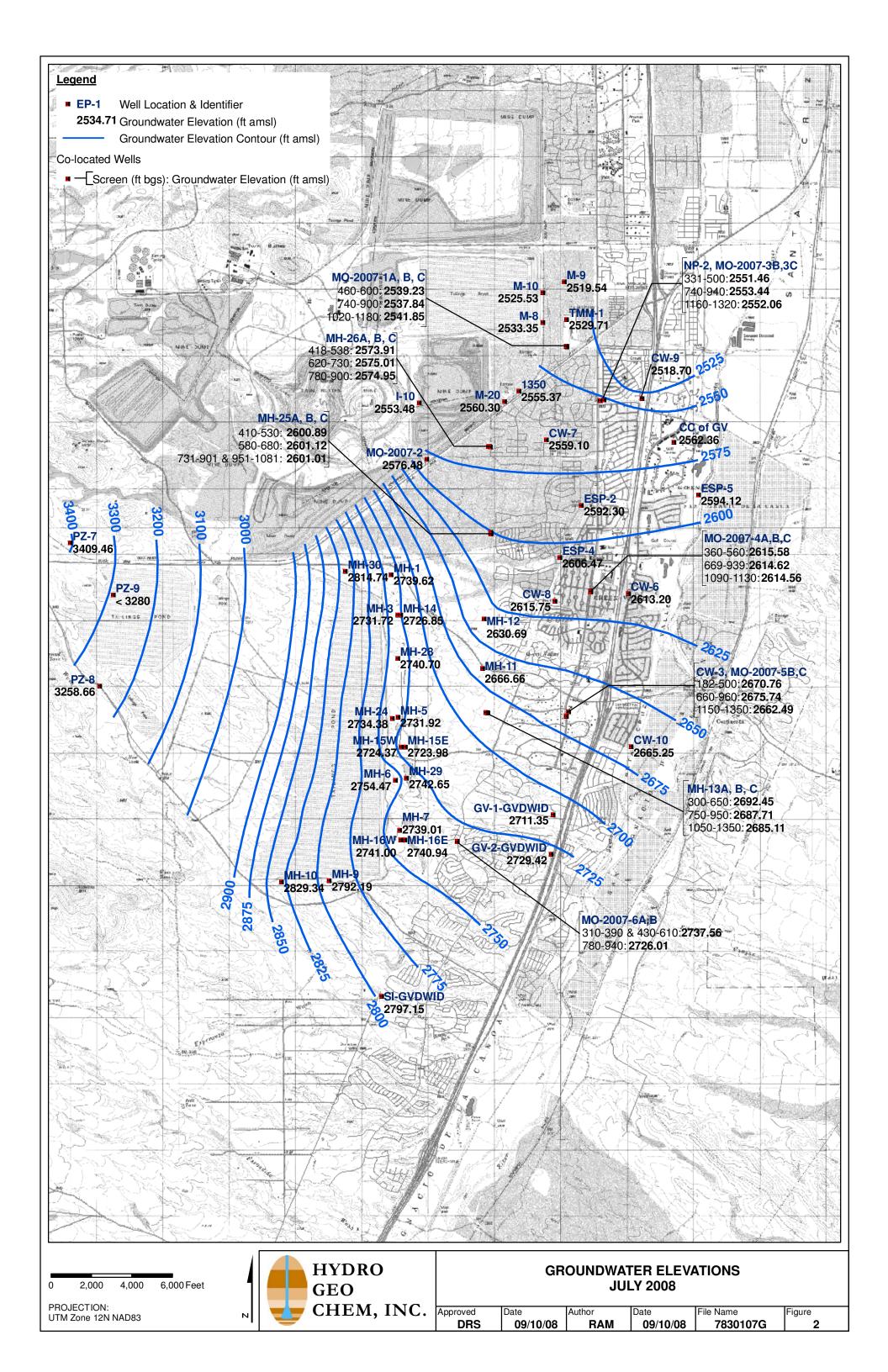
UTM = Universal Transverse Mercator, Zone 12 Band S

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





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

TABLE OF CONTENTS

1.	INTE	RODUCT	TION	1
2.	HGC	FIELD	OPERATIONS	3
	2.1		Level Monitoring	
	2.2		dwater Sampling	
		2.2.1	Pre-Sampling Field Activities	
		2.2.2	Well Purging, Field Measurements, and Sample Collection	
		2.2.3	Post-Sampling Field Activities	
3.	SAM	PLE HA	NDLING	7
4.	LAB	ORATO	RY QUALITY CONTROL	9
	4.1		sure	
	4.2		tical Methods	
	4.3	Metho	od Detection Limits (MDLs) and Practical Quantification Limits (PQL	.s) 10
	4.4	Timel	iness	10
	4.5	Qualit	y Control Measurements	
		4.5.1	1 '	
		4.5.2	Standards Analytical Spikes and Analytical Spike Duplicates	
		4.5.2	Laboratory Control Samples	
		4.5.4	Laboratory Duplicate Samples	
		4.5.4	Field Blank Samples	
			•	
5.			LITY INDICATORS	
	5.1		ion	
	5.2			
	5.3		acy	
	5.4		sentativeness	
	5.5	-	arability	
	5.6		leteness	
	5.7	Sensit	ivity	18
6.	REFI	ERENCE	ES	19

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

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc

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.

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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 [µS/cm], and temperature in degrees Celsius [°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

A-3

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc 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

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

QFIBIBIS CHAMPEN WAS PAYIBENCET USING a standard stock solAti5n of 1413 µS/cm H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc

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.

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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:

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

• 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	Method MDL (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.

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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 <u>Laboratory Control Samples</u>

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

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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.

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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:

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

• 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.

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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.

Q3 08 Sierrita Appendix A DV Report.doc H:\78300\REPORTS\Q3 08 Sierrita Appendix A DV Report.doc September 26, 2008

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				
Number of du	ells sampled by Sierrita ¹ : 62 plicate samples collected: 5 ank samples collected: 2 (1 field blank and 1 equipment blank)				
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				
Number of du	ells sampled by HGC ² : 13 plicate samples collected: 1 ank samples collected: 2 (1 unfiltered field blank and 1 filtered equipment blank)				
L70337	SI-GVDWID, GV-1-GVDWID, GV-2-GVDWID, CC of GV, HAVEN GOLF				

CW-6, CW-7, CW-8, CW-9, CW-10, TMM-1, DUP070808, EQB070808, FB070808

CW-3, NP-2

ACZ

L70408

L70455

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.



Analytical Report

July 30, 2008

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

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

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.

S. Havermehl





Inorganic Analytical Results

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 Qu	al XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1660		ma/L	50	250	07/08/08 10:08	aki

Arizona license number: AZ0102

Inorganic Analytical Results

FMI Gold & Copper - Sierrita

ACZ Sample ID: L70281-02 Project ID: OJ06DZ Date Sampled: 07/01/08 11:58

Sample ID: PZ-8 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	gkį

Arizona license number: AZ0102

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

Por	ort	Has	dor	Evn	anai	ions
LZG.	ווטע	1166	laei.	EX 91	ellel	uons

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

			oes

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

ACZ Project ID: L70281

FMI Gold & Copper - Sierrita

Alkalinity as CaC	:O3		SM2320B	- Titration									
ACZ ID	Туре	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, disso	lved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196 CV	ICV	07/16/08 14:39	11080115-3	2		1.964	mg/L	98.2	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.09	0.09			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	1		1.036	mg/L	103.6	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	1	U	1.19	mg/L	119	85	115			М
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	1	U	1.202	mg/L	120.2	85	115	1	20	М
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.02006		.02098	mg/L	104.6	90	110			
WG248346 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248912													
WG248912 CV	ICV	07/28/08 16:32	MS080722-4	.05		.05382	mg/L	107.6	90	110			
WG248912 CB	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, dissolve	d		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196 CV	ICV	07/16/08 14:39	11080115-3	2		1.977	mg/L	98.9	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.009	0.009			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	.5		.5226	mg/L	104.5	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	.5	.012	.5826	mg/L	114.1	85	115			
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	.5	.012	.5903	mg/L	115.7	85	115	1.31	20	M

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Project ID: OJ06DZ Beryllium, dissolved M200.8 ICP-MS ACZ ID Туре Analyzed PCN/SCN QC Found Units 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 U L70281-02AS AS 07/28/08 17:06 MS080714-1 .05005 04732 94.5 70 130 mg/L 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 PCN/SCN QC Qual Analyzed Sample Found Units Rec Lower Upper RPD Limit Type WG248346 WG248346|CV ICV 07/25/08 18:47 .05135 110 MS080714-1 .05 mg/L 102.7 90 WG248346|CB ICB -0.0003 0.0003 07/25/08 18:53 U mg/L WG248346LFB LFB MS080714-1 .04942 07/25/08 19:05 .05 mg/L 98.8 85 115 L70281-02AS U AS 07/25/08 19:34 MS080714-1 .05 .04824 mg/L 96.5 70 130 U 70 L70281-02ASD ASD 07/25/08 19:39 MS080714-1 .05 .04821 mg/L 96.4 130 0.06 20 Calcium, dissolved M200.7 ICP ACZ ID PCN/SCN Units Qual Analyzed QC Sample Found Lower Upper RPD Limit Type Rec WG248196 WG248196ICV ICV 07/16/08 14:39 11080115-3 100 94.45 mg/L 94.5 95 105 WG248196|CB ICB 07/16/08 14:42 U -0.6 0.6 mg/L LFB WG248196LFB 11080708-3 67.97008 68.5 07/16/08 14:55 mg/L 100.8 85 115 L70263-02AS AS 07/16/08 16:08 11080708-3 67 97008 80.1 150.84 mg/L 104.1 85 115 L70263-02ASD ASD 07/16/08 16:11 11080708-3 67.97008 80.1 151.79 mg/L 105.5 85 115 0.63 20 Chloride SM4500CI-E ACZ ID Туре Analyzed PCN/SCN Found Units Rec Lower Upper Limit 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 -3 3 mg/L WG248009 WG248009ICV ICV 07/12/08 22:04 WI071212-1 54.945 55.2 mg/L 100.5 90 110 WG248009|CB ICB 07/12/08 22:05 U mg/L -3 3 WG248009LFB1 LFB 07/12/08 22:06 WI080620-3 29.9 mg/L 90 30 99.7 110 L70281-02DUP DUP 07/12/08 22:23 56 56.1 mg/L 0.2 20 WG248009LFB2 29.7 LFB 07/12/08 22:33 WI080620-3 30 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 WG248196 WG248196ICV ICV 07/16/08 14:39 11080115-3 2 1.909 95.5 95 105 mg/L WG248196ICB ICB 07/16/08 14:42 U mg/L -0.03 0.03 WG248196LFB LFB 07/16/08 14:55 11080708-3 .5 .51 mg/L 102 85 115 L70263-02AS AS 07/16/08 16:08 11080708-3 .5 U 563 mg/L 112.6 85 115 L70263-02ASD ASD 07/16/08 16:11 11080708-3 .5 U .571 mg/L 114.2 85 115 1.41 20

(800) 334-5493

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Cobalt, dissolved	í		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248276													
WG248276 CV	ICV	07/17/08 23:43	11080717-3	2		1.934	mg/L	96.7	95	105			
WG248276 CB	ICB	07/17/08 23:47				U	mg/L		-0.03	0.03			
WG248276LFB	LFB	07/17/08 23:59	11080708-3	.5		.537	mg/L	107.4	85	115			
L70263-01AS	AS	07/18/08 0:54	11080708-3	.5	U	.515	mg/L	103	85	115			
L70263-01ASD	ASD	07/18/08 0:57	11080708-3	.5	U	.508	mg/L	101.6	85	115	1.37	20	
Conductivity @25	5C		SM2510B										
ACZ ID	Туре	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	umhos/cm	102.6	90	110			
WG247800LCSW4	LCSW	07/09/08 18:33	PCN28873	1408.8		1451	umhos/cm	103	90	110			
L70281-02DUP	DUP	07/09/08 21:51			1260	1263	umhos/cm				0.2	20	
WG247800LCSW7	LCSW	07/09/08 21:58	PCN28873	1408.8		1440	umhos/cm	102.2	90	110			
WG247800LCSW10	LCSW	07/10/08 1:15	PCN28873	1408.8		1442	umhos/cm	102.4	90	110			
WG247800LCSW13	LCSW	07/10/08 3:19	PCN28873	1408.8		1433	umhos/cm	101.7	90	110			
Copper, dissolve	d		M200.7 IC	;P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	11080115-3	2		1.908	mg/L	95.4	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	.5		.517	mg/L	103.4	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	.5	U	564	mg/L	112.8	85	115			
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	.5	U	.573	mg/L	114.6	85	115	1.58	20	
Cyanide, total			M335.4 - 0	Colorimet	ric w/ distil	lation							
ACZ ID	Туре	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			
WG248043 CB	ICB	07/14/08 15:58				U	mg/L		-0.009	0.009			
WG248065							Ü						
WG248065 CV	ICV	07/14/08 16:48	WI080711-5	.3		.2989	mg/L	99.6	90	110			
WG248065 CB	ICB	07/14/08 16:49				U	mg/L	00.0	-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			
L/0201-01L1 W			SM4500F-	-C									
Fluoride													
	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
Fluoride ACZ ID	Туре	Analyzed		QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
Fluoride ACZ ID WG248037			PCN/SCN		Sample						RPD	Limit	Qual
Fluoride ACZ ID WG248037 WG248037 CV	ICV	07/14/08 13:48		QC 2	Sample	1.85	mg/L	92.5	90	110	RPD	Limit	Qual
Fluoride ACZ ID WG248037 WG248037 CV WG248037 CB	ICV ICB	07/14/08 13:48 07/14/08 13:54	PCN/SCN WC080714-1	2	Sample	1.85 U	mg/L mg/L	92.5	90 -0.3	110 0.3	RPD	Limit	Qual
Fluoride ACZ ID WG248037 WG248037 CV	ICV	07/14/08 13:48	PCN/SCN		Sample	1.85	mg/L		90	110	RPD	Limit	Qual

Inorganic QC

FMI Gold & Copper - Sierrita

Iron, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248276													
WG248276 CV	ICV	07/17/08 23:43	11080717-3	2		1.961	mg/L	98.1	95	105			
WG248276 CB	ICB	07/17/08 23:47				U	mg/L		-0.06	0.06			
WG248276LFB	LFB	07/17/08 23:59	11080708-3	1		1.11	mg/L	111	85	115			
L70263-01AS	AS	07/18/08 0:54	11080708-3	1	U	1.061	mg/L	106.1	85	115			
L70263-01ASD	ASD	07/18/08 0:57	11080708-3	1	U	1.048	mg/L	104.8	85	115	1.23	20	
Lead, dissolved			M200.8 IC	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248214													
WG248214 CV	ICV	07/16/08 21:31	MS080714-1	.05		.05064	mg/L	101.3	90	110			
WG248214 CB	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, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248196													
WG248196ICV	ICV	07/16/08 14:39	11080115-3	100		96.43	mg/L	96.4	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.6	0.6			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	49.96908		51.06	mg/L	102.2	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	49.96908	10.6	66.92	mg/L	112.7	85	115			
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	49.96908	10.6	67.48	mg/L	113.8	85	115	0.83	20	
Manganese, dis	solved		M200.7 I	DP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248196													
WG248196 CV	ICV	07/16/08 14:39	11080115-3	2		1.9077	mg/L	95.4	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.015	0.015			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	.5		5466	mg/L	109.3	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	.5	.668	1.2167	mg/L	109.7	85	115			
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	.5	.668	1.2288	mg/L	112.2	85	115	0.99	20	
Mercury, dissolv	ved		M245.1 C	VAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG247567													
WG247567 CV	ICV	07/08/08 15:06	11080624-3	.00501		.00487	mg/L	97.2	95	105			
WG247567ICB	ICB	07/08/08 15:08				U	mg/L	57.2	-0.0002	0.0002			
WG247719							3						
	LRB	07/08/08 18:34				U	mg/L		-0.00044	0.00044			
VV(1/4// VIRK	(D			000			•	00					
	LFR	07/08/08 18:37	11080610-3	()(1)		()()182	ma/I		מא	115			
WG247719LRB WG247719LFB L70263-01LFM	LFB LFM	07/08/08 18:37 07/08/08 18:42	080610-3 080610-3	.002	U	.00184 .00185	mg/L mg/L	92 92.5	85 85	115 115			

(800) 334-5493

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Molybdenum, dis	solved		M200.7 I	СР									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196 CV	ICV	07/16/08 14:39	11080115-3	2		1.934	mg/L	96.7	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	.5		.501	mg/L	100.2	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	.5	U	.538	mg/L	107.6	85	115			
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	.5	U	.539	mg/L	107.8	85	115	0.19	20	
Nickel, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248363													
WG248363 CV	ICV	07/19/08 16:02	11080717-3	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	11080708-3	.5		.556	mg/L	111.2	85	115			
L70263-01AS	AS	07/19/08 17:16	11080708-3	1	.02	1.108	mg/L	108.8	85	115			
L70263-01ASD	ASD	07/19/08 17:19	11080708-3	1	.02	1.116	mg/L	109.6	85	115	0.72	20	
Nitrate/Nitrite as	N		M353.2 -	H2SO4 pr	eserved								
ACZ ID	Туре	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			
WG247998 CB	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 -	Electrome	tric								
ACZ ID	Туре	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, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196 CV	ICV	07/16/08 14:39	11080115-3	20		19.65	mg/L	98.3	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.9	0.9			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	99.76186		103.38	mg/L	103.6	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	99.76186	2.6	119.27	mg/L	116.9	85	115			N
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	99.76186	2.6	120.45	mg/L	118.1	85	115	0.98	20	N

FMI Gold & C Project ID:		- Sierrita J06DZ						ACZ F	Project II	D: L70	281		
Residue, Filtera	ble (TDS	s) @180C	SM2540C	;									
ACZ ID	Туре	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, disso	lved		M200.8 IC	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248214													
WG248214 CV	ICV	07/16/08 21:31	MS080714-1	.05		.05106	mg/L	102.1	90	110			
WG248214 CB	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, dissolv	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	11080115-3	100		97.82	mg/L	97.8	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.9	0.9			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	98.21624		102.09	mg/L	103.9	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	98.21624	25.2	136.82	mg/L	113.6	85	115			
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	98.21624	25.2	138.05	mg/L	114.9	85	115	0.89	20	
Sulfate			SM4500 S	SO4-D									
ACZ ID	Туре	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, dissol	ved		M200.8 IC	CP-MS									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248214													
WG248214 CV	ICV	07/16/08 21:31	MS080714-1	.05		05343	mg/L	106.9	90	110			
WG248214 CB	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, dissol	ved		M200.8 IC	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248214													
WG248214 CV	ICV	07/16/08 21:31	MS080714-1	.05		.05133	mg/L	102.7	90	110			
WG248214 CB	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	

EMI Gold & Coppor Signific

FMI Gold & Copper - Sierrita Project ID: OJ06DZ

ACZ Project ID: L70281

Zinc, dissolved			M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248196													
WG248196ICV	ICV	07/16/08 14:39	11080115-3	2		1.894	mg/L	94.7	95	105			
WG248196 CB	ICB	07/16/08 14:42				U	mg/L		-0.03	0.03			
WG248196LFB	LFB	07/16/08 14:55	11080708-3	.5		.511	mg/L	102.2	85	115			
L70263-02AS	AS	07/16/08 16:08	11080708-3	.5	2.9	3.249	mg/L	69.8	85	115			М3
L70263-02ASD	ASD	07/16/08 16:11	11080708-3	.5	2.9	3.262	mg/L	72.4	85	115	0.4	20	М3

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: L70281

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70281-01	WG248196	Aluminum, dissolved	M200.7 CP	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 CP	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 CP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, dissolved	M200,7 CP	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	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 CP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Zinc, dissolved	M200.7 CP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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).

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: L70281

No certification qualifiers associated with this analysis



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Date Printed: 7/3/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		X
Х		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	
		X
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

S - 100 10		OIDON	Dirogo	'vation
10 7 2 1 1 1 1 0 1	1100		12(5)(5)	WAN-2

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70281-01	MH-30		Υ		Υ							
L70281-02	PZ-8		Υ		Υ							

Sample Container Preservation Legend

Description	Container Type	Preservative/Limits
Raw/Nitric	RED	pH must be < 2
Filtered/Sulfuric	BLUE	pH must be < 2
Filtered/Nitric	BLACK	pH must be < 2
Filtered/Nitric	GREEN	pH must be < 2
Raw/Sulfuric	ORANGE	pH must be < 2
Raw/NaOH	PURPLE	pH must be > 12 *
Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Raw/Sulfuric	YELLOW	pH must be < 2
Raw/Sulfuric	YELLOW GLASS	pH must be < 2
No preservative needed	Not applicable	
Gamma/Beta dose rate	Not applicable	must be $< 250 \mu R/hr$
	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric Raw/Sulfuric Raw/NaOH Raw/NaOH Zinc Acetate Raw/Sulfuric Raw/Sulfuric No preservative needed	Raw/Nitric RED Filtered/Sulfuric BLUE Filtered/Nitric BLACK Filtered/Nitric GREEN Raw/Sulfuric ORANGE Raw/NaOH PURPLE Raw/NaOH Zinc Acetate TAN Raw/Sulfuric YELLOW Raw/Sulfuric YELLOW GLASS No preservative needed Not applicable

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:	

ACZ Labo 2773 Downhill Drive Steambo	oratories, Inc. pat Springs, CO 80487 (E	800) 33	 	JA (91		CH	AIN	of C	UST	ODY
Name: Bill Doccis	5		Addr	ess: 6	<i>20</i> 0 -	w. N	11/0	ni	ne R	ار ا	
Company: Freeport 1		1		een V							
E-mail: billy-dorrise	fni.com			ohone:							
Copy of Report to:											
Name: Dan Simpso	<u>^</u>		E-ma	iil: 👌	<u>an 56</u>	≥ hg	inc,	Com	1		
Company: Hydro Geo	Chem								T 13	3.	
Invoice to:											
Name:			Addr	ess:							
Company:		_		 -							
E-mail:				ohone:						 	
If sample(s) received past hold analysis before expiration, shal If "NO" then ACZ will contact of is indicated. ACZ will proceed a	II ACZ proceed with reques client for further instructio	sted sho on. If ne	ort HT a ither "Y	nalyses ŒS" noi	? "NO"				YES NO]
is indicated, ACZ will proceed we PROJECT INFORMATION	with the requested analyse	s, even							use quo	ote nun	nher)
Quote #:		T	1								1.0017
Project/PO#: OJø6]	D 2	7	ers								
Reporting state for complia			Containers								
Sampler's Name:			ਤ								
Are any samples NRC licens	able material?		# of								
SAMPLE IDENTIFICATION	DATE:TIME	Matrix									
MH-30	7-1-08/8:15	(GW)		A	MB	1En	17	T	2		
P 7 -8	7-1-08/ 11:58	GW	5				· .				
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	GW (Ground Water) · WW (W	/aste Wat	ter) · D\	N (Drinki	ng Wate	er) · SL	(Sludge) · SO ((Soil) - C)L (Oil)	- Other
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Billy 7. Com	2 7-2-08/1	5:00					_		7.30	810:1	2
									 		



Analytical Report

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

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.

S. Habermehl





FMI Gold & Copper - Sierrita

Project ID: OJ06DZ Date Sampled: 07/01/08 08:50

Sample ID: MH-28 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	aki

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 X	Q Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1730	Н *	ma/L	20	100	07/31/08 10:15	ilf

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

Panart	Header	Evni	anai	ione
Kebolt	пеацег	1-2391	ellet	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

		vnes

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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

Alkalinity as CaC	:O3		SM2320B	- Titration	ļ								
ACZ ID	Туре	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, disso	lved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	2		1.968	mg/L	98.4	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.09	0.09			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	1		1.007	mg/L	100.7	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	1	U	1.011	mg/L	101.1	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	1	U	.982	mg/L	98.2	85	115	2.91	20	
Antimony, disso	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.02006		.02098	mg/L	104.6	90	110			
WG248346 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.05		.05174	mg/L	103.5	90	110			
WG248346 CB	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													
WG248912 CV	ICV	07/28/08 16:32	MS080722-4	.05		.05382	mg/L	107.6	90	110			
WG248912 CB	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

Project ID:	С	J06DZ							,				
Barium, dissolv	/ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	2		2.0283	mg/L	101.4	95	105			
WG248224 CB	ICB	07/16/08 22:47		-		U	mg/L		-0.009	0.009			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	.5		.5128	mg/L	102.6	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	.5	.047	.5462	mg/L	99.8	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	.5	.047	.5375	mg/L	98.1	85	115	1.61	20	
Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG248912 CB	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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.05		.05135	mg/L	102.7	90	110			
WG248346 CB	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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	100		94.98	mg/L	95	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.6	0.6			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	67.97008		67.82	mg/L	99.8	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	67.97008	192	248.06	mg/L	82.5	85	115			M2
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	67.97008	192	244.51	mg/L	77.3	85	115	1.44	20	M2
Chloride			SM45000	CI-E									
ACZ ID	Туре	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			
WG248008 CB	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			

(800) 334-5493

FMI Gold & Copper - Sierrita

Chromium, disso	lved		M200.7 (CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	2		1.906	mg/L	95.3	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	.5		.516	mg/L	103.2	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	.5	U	.504	mg/L	100.8	85	115			
_70264-01ASD	ASD	07/17/08 0:11	11080708-3	.5	U	.49	mg/L	98	85	115	2.82	20	
Cobalt, dissolved	<u> </u>		M200.7 I	DP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248275													
WG248275 CV	ICV	07/18/08 1:47	II080717 - 3	2		1.915	mg/L	95.8	95	105			
WG248275 CB	ICB	07/18/08 1:51				U	mg/L		-0.03	0.03			
WG248275LFB	LFB	07/18/08 2:03	11080708-3	.5		.542	mg/L	108.4	85	115			
L70162-01AS	AS	07/18/08 2:10	11080708-3	.5	U	.553	mg/L	110.6	85	115			
L70162-01ASD	ASD	07/18/08 2:13	11080708-3	.5	U	.547	mg/L	109.4	85	115	1.09	20	
Conductivity @25	5C		SM2510B	3									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG247800													
WG247800LCSW1	LCSW	07/09/08 15:37	PCN28873	1408.8		1445	umhos/cm	102.6	90	110			
				1408.8						110			
WG247800LCSW4	LCSW	07/09/08 18:33	PCN28873			1451	umhos/cm	103	90				
WG247800LCSW7	LCSW	07/09/08 21:58	PCN28873	1408.8	0000	1440	umhos/cm	102.2	90	110	0.0	0.0	
_70295-01DUP	DUP	07/09/08 23:34	501100050		3090	3100	umhos/cm				0.3	20	
WG247800LCSW10		07/10/08 1:15	PCN28873	1408.8		1442	umhos/cm	102.4	90	110			
WG247800LCSW13	LCSW	07/10/08 3:19	PCN28873	1408.8		1433	umhos/cm	101.7	90	110			
Copper, dissolve	d		M200.7 IC	CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248224													
WG248224ICV	ICV	07/16/08 22:43	11080115-3	2		1.945	mg/L	97.3	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	.5		.512	mg/L	102.4	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	.5	U	.499	mg/L	99.8	85	115			
_70264-01ASD	ASD	07/17/08 0:11	11080708-3	.5	U	492	mg/L	98.4	85	115	1.41	20	
Cyanide, total			M335.4 -	Colorimet	ric w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248112													
WG248112ICV	ICV	07/15/08 11:43	WI080711-5	.3		2787	mg/L	92.9	90	110			
WG248112 CB	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			
	LFB	07/15/08 12:14	WI080711-2	.2		.2024	mg/L	101.2	90	110			
NG248038I FR	LFD												
WG248038LFB L70263-02LFM	LFM	07/15/08 12:14	WI080711-2	.2	U	.208	mg/L	104	90	110			

(800) 334-5493

FMI Gold & Copper - Sierrita

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			
WG248037 CB	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			M
L70172-02DUP	DUP	07/14/08 15:36			.1	.14	mg/L				33.3	20	R
Iron, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224ICV	ICV	07/16/08 22:43	11080115-3	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	11080708-3	1		1.068	mg/L	106.8	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	1	.54	1.53	mg/L	99	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	1	.54	1.505	mg/L	96.5	85	115	1.65	20	
Lead, dissolved			M200.8 I	CP-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			
WG248346 CB	СВ	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, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	080115-3	100		97.24	mg/L	97.2	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.6	0.6			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	49.96908		50.22	mg/L	100.5	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	49.96908	37.5	85.79	mg/L	96.6	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	49.96908	37.5	84.45	mg/L	94	85	115	1.57	20	
Manganese, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275 CV	ICV	07/18/08 1:47	11080717-3	2		1.9756	mg/L	98.8	95	105			
WG248275 CB	ICB	07/18/08 1:51		-		U	mg/L	23.0	-0.015	0.015			
WG248275LFB	LFB	07/18/08 2:03	11080708-3	.5		.5719	mg/L	114.4	85	115			
L70162-01AS	AS	07/18/08 2:10	11080708-3	.5	.158	.7308	mg/L	114.6	85	115			
5 . 5 _ 5 . 7 . 6		377 - 37 30 2 - 10				., 500	9/ -		50				

(800) 334-5493

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Mercury, dissol	ved		M245.1 C	VAA									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247567													
WG247567 CV	ICV	07/08/08 15:06	11080624-3	.00501		.00487	mg/L	97.2	95	105			
WG247567 CB	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	11080610-3	.002		00184	mg/L	92	85	115			
L70263-01LFM	LFM	07/08/08 18:42	11080610-3	.002	U	.00185	mg/L	92.5	85	115			
L70263-01LFMD	LFMD	07/08/08 18:44	11080610-3	.002	U	.00187	mg/L	93.5	85	115	1.08	20	
Molybdenum, d	issolved		M200.7 (CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	2		1.924	mg/L	96.2	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	.5		.485	mg/L	97	85	115			
_70264-01AS	AS	07/17/08 0:01	11080708-3	.5	U	468	mg/L	93.6	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	.5	U	.463	mg/L	92.6	85	115	1.07	20	
Nickel, dissolve	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248360													
WG248360 CV	ICV	07/19/08 18:09	11080717-3	2		1.965	mg/L	98.3	95	105			
WG248360 CB	ICB	07/19/08 18:13				U	mg/L		-0.03	0.03			
WG248360LFB	LFB	07/19/08 18:25	11080708-3	.5		.559	mg/L	111.8	85	115			
L70292-01AS	AS	07/19/08 18:54	11080708-3	2.5	U	2.758	mg/L	110.3	85	115			
L70292-01ASD	ASD	07/19/08 19:03	11080708-3	2.5	U	2.773	mg/L	110.9	85	115	0.54	20	
Nitrate/Nitrite as	s N		M353.2 -	H2SO4 pr	eserved								
ACZ ID	Туре	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	W 080312-1	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			
							-						

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FMI Gold & Copper - Sierrita

L70264-01ASD

pH (lab)			M150.1 -	Electromet	ric								
ACZ ID	Туре	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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	20		20.11	mg/L	100.6	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.9	0.9			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	99.76186		101.38	mg/L	101.6	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	99.76186	6.3	109.61	mg/L	103.6	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	99.76186	6.3	107.24	mg/L	101.2	85	115	2.19	20	
Residue, Filterab	le (TDS) @180C	SM25400	<u> </u>									
ACZ ID	Туре	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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.05		.05188	mg/L	103.8	90	110			
WG248346 CB	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, dissolve	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	100		98.87	mg/L	98.9	95	105			
WG248224 CV	ICV	07/16/08 22:43	11080115-3	100		97	mg/L	97	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		- 6	6			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.9	0.9			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	98.21624		98	mg/L	99.8	85	115			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	98.21624		99.82	mg/L	101.6	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	98.21624	17.8	115.57	mg/L	99.5	85	115			
L70004 04ACD	A CD	07/17/00 0.11	110007000	00.24.02.4			J.	-					

98.21624 17.8 113.94 mg/L

97.9

85

115 1.42 20

11080708-3

ASD 07/17/08 0:11

FMI Gold & Copper - Sierrita

Sulfate			SM4500 S	O4-D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC 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	R
Thallium, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.05		.05202	mg/L	104	90	110			
WG248346 CB	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, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248346													
WG248346 CV	ICV	07/25/08 18:47	MS080714-1	.05		.04941	mg/L	98.8	90	110			
WG248346 CB	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 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248224													
WG248224 CV	ICV	07/16/08 22:43	11080115-3	2		1.928	mg/L	96.4	95	105			
WG248224 CB	ICB	07/16/08 22:47				U	mg/L		-0.03	0.03			
WG248224LFB	LFB	07/16/08 23:00	11080708-3	.5		504	mg/L	100.8	85	115			
L70264-01AS	AS	07/17/08 0:01	11080708-3	.5	.07	.562	mg/L	98.4	85	115			
L70264-01ASD	ASD	07/17/08 0:11	11080708-3	.5	.07	.553	mg/L	96.6	85	115	1.61	20	

Inorganic Extended Qualifier Report

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 [< 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 (< 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).
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 (< 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).
	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 (< 10x MDL).

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: L70285

No certification qualifiers associated with this analysis



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By: Date Printed:

7/3/2008

Receipt Verification

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

YES	NO	NA
		X
X		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	_
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

ACZ Project ID: Date Received:

L70285 7/3/2008

Received By:

Sample Container Preserva	tion	
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SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L70285-01	MH-28		Υ		Υ							
L70285-02	MH-29		Υ		Υ							

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

2773 Downhill Drive Ste	aboratorie eamboat Springs, C	•	300) 334	1		85	$\overline{)}$	CHA	AIN (of Cl	UST	ODY
Report to:			<u> </u>	i								
Name: Bill Dorn					ess: 🕜						<u>Rd_</u>	
Company: Freeport			4		en l					4		
E-mail: billy-dorn	S@fmi.Coi	n		Telep	hone:	520	n-64	8-88	773			
Copy of Report to:												
Name: Dan Sim	pson			E-mai	ii: dar	15@	hg in	C. CO	m			
Company: Hydro	Geo Chem			Telep	hone:	520	29	3 15	00 1	EXT	133	
Invoice to:			-									
Name:				Addre	ess:							
Company:			7									
E-mail:				Telep	hone:							
If sample(s) received pas	st holding time (HT), or if insuffi	cient HT			mplete)			YES		
analysis before expiration	•	-			-					NO		J
If "NO" then ACZ will cor							data wi	ill be au	alified			
is indicated, ACZ will pro- PROJECT INFORMATIO		esteu arialyse	ss, even								ote nun	nber)
Quote #:	•											· · ·
Project/PO #: 050	WDZ			ers								
Reporting state for co		•	1	Containers								
Sampler's Name:	mphanee testing	•	7	8								
Are any samples NRC	licensable materi	al?	┪	₽							ļ	
SAMPLE IDENTIFICA		E:TIME	Matrix	*								
MH-28		/ 8:50	GW	5			2.		_		,	
MH-29		10:50	GW	5	1-1	111	191E	NI		15		
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Matrix SW (Surface W	ater) · GW (Ground W	Vater) · WW (V	Naste Wat	er) · D	W (Drink	ing Wa t	er) · Sl	_ (Sludge) · SO	(Soil) ·	OL (Oil)	• Other
REMARKS/ SAMPLE DI												
"Copy of Report"	to Dan Simps	on contain	15 only	504	112501	145 W	th E)C 52	mmo	14.		٦ ،
Please generate a to Rick Smith. 1	third report Rick Smith@	Containin Descara	is "VRF	25011	ΓΕ΄ Γε	250 115	wit	h GC	Dum.	mary	ano	DAGE
to Rick Smith. I Please generate a and send with "I	Fourth report	t containi	ng "Bu	iar ter	450.	te" n	esult	5 w	th Q	C Su	nnay	FAGE
and send with "1	Ambient-TB" (results to	Bill	Dorr	is.							of
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				L								



Analytical Report

July 25, 2008

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

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

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.

S. Havermehl





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	*	ma/L	10	50	07/08/08 11:11	aki

FMI Gold & Copper - Sierrita

ACZ Sample ID: L70303-02 Project ID: OJ06DZ Date Sampled: 07/02/08 09:29

Sample ID: MH-25B 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

FMI Gold & Copper - Sierrita

ACZ Sample ID: **L70303-03** Project ID: OJ06DZ Date Sampled: 07/02/08 08:55

Sample ID: MH-25C 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

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ Sample ID: MH-26A 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	В	mg/L	10	50	07/09/08 16:25	ear

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 Qua	ıl XQ	Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	1660		ma/L	50	250	07/09/08 16:29	ear

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ Sample ID: MH-26C 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		ma/L	10	50	07/09/08 16:32	ear

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		ma/L	10	50	07/09/08 16:36	ear

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Report	Header	Expl	anati	ons

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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: OJ06DZ

Alkalinity as CaC	O3		SM2320B	- Titration	า								
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	R/
WG247800LCSW14	LCSW	07/10/08 3:30	WC080702-8	820		794	mg/L	96.8	90	110			
Aluminum, disso	lved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226 CV	ICV	07/17/08 1:02	11080115-3	2		1.97	mg/L	98.5	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.09	0.09			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	1		1.133	mg/L	113.3	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	1	.06	1.174	mg/L	111.4	85	115			
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	1	.06	1.16	mg/L	110	85	115	1.2	20	
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248256													
WG248256 CV	ICV	07/18/08 6:32	MS080714-1	.02006		.02185	mg/L	108.9	90	110			
WG248256 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	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		.0535	mg/L	107	90	110			
WG248256 CB	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	

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Barium, dissolv	ved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248226													
WG248226 CV	ICV	07/17/08 1:02	11080115-3	2		1.9698	mg/L	98.5	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.009	0.009			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	.5		.5502	mg/L	110	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	.5	.018	.565	mg/L	109.4	85	115			
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	.5	.018	.5564	mg/L	107.7	85	115	1.53	20	
Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248256													
WG248256 CV	ICV	07/18/08 6:32	MS080714-1	.05		.05156	mg/L	103.1	90	110			
WG248256 CB	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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248256													
WG248256 CV	ICV	07/18/08 6:32	MS080714-1	.05		.0523	mg/L	104.6	90	110			
WG248256 CB	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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248226													
WG248226 CV	ICV	07/17/08 1:02	11080115-3	100		95.32	mg/L	95.3	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.6	0.6			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	67.97008		71.3	mg/L	104.9	85	115			
	AS	07/17/08 2:18	11080708-3	67.97008	31.6	101.12	mg/L	102.3	85	115			
L70303-01AS	AS	01/11/00 2.10	11000700-3	01.31000	31.0	101.12	my/L	102.3	00	110			

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Chloride			SM4500C	OI-E									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248008													
WG248008 CV	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		0.00.0		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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248465													
WG248465 CV	ICV	07/21/08 13:43	11080717-3	2		1.926	mg/L	96.3	95	105			
WG248465 CB	ICB	07/21/08 13:46				U	mg/L	00.0	-0.03	0.03			
WG248465LFB	LFB	07/21/08 13:59	11080708-3	.5		.536	mg/L	107.2	85	115			
L70303-01AS	AS	07/21/08 14:19	11080708-3	.5	U	578	mg/L	115.6	85	115			М
L70303-01ASD	ASD	07/21/08 14:29	11080708-3	.5	U	.57	mg/L	114	85	115	1.39	20	
WG248496							Ü						
WG248496 CV	ICV	07/21/08 21:49	11080717-3	2		2.047	mg/L	102.4	95	105			
WG248496 CB	ICB	07/21/08 21:52				U	mg/L		-0.03	0.03			
WG248496LFB	LFB	07/21/08 22:04	11080708-3	.5		.501	mg/L	100.2	85	115			
L70309-05AS	AS	07/21/08 22:26	11080708-3	.5		526	mg/L	105.2	85	115			
L70309-05ASD	ASD	07/21/08 22:29	11080708-3	.5		.536	mg/L	107.2	85	115	1.88	20	
Cobalt, dissolved	t		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275 CV	ICV	07/18/08 1:47	11080717-3	2		1.915	mg/L	95.8	95	105			
WG248275 CB	ICB	07/18/08 1:51				U	mg/L	00.0	-0.03	0.03			
WG248275LFB	LFB	07/18/08 2:03	11080708-3	.5		.542	mg/L	108.4	85	115			
L70303-01AS	AS	07/18/08 3:04	11080708-3	.5	U	.537	mg/L	107.4	85	115			
L70303-01ASD	ASD	07/18/08 3:07	11080708-3	.5	U	.541	mg/L	108.2	85	115	0.74	20	
Conductivity @2	5C		SM2510B	3									
ACZ ID	Туре	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	umhos/cm	102.6	90	110			
WG247800LCSW4	LCSW	07/09/08 18:33	PCN28873	1408.8		1451	umhos/cm	103	90	110			
WG247800LCSW7	LCSW	07/09/08 21:58	PCN28873	1408.8		1440	umhos/cm	102.2	90	110			
L70303-05DUP	DUP	07/10/08 1:06			2950	2940	umhos/cm		00		0.3	20	
WG247800LCSW10		07/10/08 1:15	PCN28873	1408.8		1442	umhos/cm	102.4	90	110		-	
L70309-08DUP	DUP	07/10/08 2:12	5.,_55.5		25	24.8	umhos/cm		30		0.8	20	
WG247800LCSW13		07/10/08 3:19	PCN28873	1408.8		1433	umhos/cm	404.7	90	110	5.0		

FMI Gold & Copper - Sierrita

Project ID:

OJ06DZ

Project ID:		JJ06DZ											
Copper, dissolv	ed		M200.7 ICF	•									
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	11080115-3	2		1.891	mg/L	94.6	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.03	0.03			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	.5		.548	mg/L	109.6	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	.5	U	.546	mg/L	109.2	85	115			
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	.5	U	537	mg/L	107.4	85	115	1.66	20	
Cyanide, total			M335.4 - C	olorime	tric w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248112													
WG248112 CV	ICV	07/15/08 11:43	WI080711-5	.3		.2787	mg/L	92.9	90	110			
WG248112 CB	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	R/
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	R/
Fluoride			SM4500F-0	2									
ACZ ID	Туре	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			
WG248037 CB	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			M
L70295-03DUP	DUP	07/14/08 16:34			.3	.3	mg/L				0	20	R/
Iron, dissolved			M200.7 ICF	•									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275 CV	ICV	07/18/08 1:47	11080717-3	2		1.962	mg/L	98.1	95	105			
WG248275 CB	ICB	07/18/08 1:51				U	mg/L		-0.06	0.06			
WG248275LFB	LFB	07/18/08 2:03	11080708-3	1		1.121	mg/L	112.1	85	115			
L70303-01AS	AS	07/18/08 3:04	11080708-3	1	U	1.116	mg/L	111.6	85	115			
L70303-01ASD	ASD	07/18/08 3:07	11080708-3	1	U	1.121	mg/L	112.1	85	115	0.45	20	
Lead, dissolved			M200.8 ICF	P-MS									
ACZ ID	Туре	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		.04874	mg/L	97.5	90	110			
WG248256 CB	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	
		07/4 0/00 0.00	1400007444	0.5			_						
L70303-06AS	AS	07/18/08 8:23	MS080714-1	.05	.0004	.04848	mg/L	96.2	70	130			

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Magnesium, dis	ssolved		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	11080115-3	100		97.02	mg/L	97	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.6	0.6			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	49.96908		54	mg/L	108.1	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	49.96908	8.5	62.64	mg/L	108.3	85	115			
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	49.96908	8.5	61.59	mg/L	106.2	85	115	1.69	20	
Manganese, dis	solved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275 CV	ICV	07/18/08 1:47	11080717-3	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	11080708-3	.5		.5719	mg/L	114.4	85	115			
L70303-01AS	AS	07/18/08 3:04	11080708-3	.5	U	.5571	mg/L	111.4	85	115			
L70303-01ASD	ASD	07/18/08 3:07	11080708-3	.5	U	5595	mg/L	111.9	85	115	0.43	20	
Mercury, dissol	ved		M245.1	CVAA									
ACZ ID	Туре	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		.0000.		U	mg/L	01.12	-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	11080610-3	.002		.00184	mg/L	92	85	115			
L70295-03LFM	LFM	07/08/08 19:13	11080610-3	.002	U	.00201	mg/L	100.5	85	115			
L70295-03LFMD	LFMD	07/08/08 19:16	11080610-3	.002	U	00202	mg/L	101	85	115	0.5	20	
Molybdenum, d	lissolved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248275													
WG248275 CV	ICV	07/18/08 1:47	II080717 - 3	2		2	mg/L	100	95	105			
WG248275 CB	ICB	07/18/08 1:51	•			U	mg/L		-0.03	0.03			
WG248275LFB	LFB	07/18/08 2:03	11080708-3	.5		.53	mg/L	106	85	115			
L70303-01AS	AS	07/18/08 3:04	11080708-3	.5	U	533	mg/L	106.6	85	115			
L70303-01ASD	ASD	07/18/08 3:07	11080708-3	.5	U	.514	mg/L	102.8	85	115	3.63	20	
Nickel, dissolve	ed		M200.7	ICP									
ACZ ID	Туре	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	11080708-3	.5		.559	mg/L	111.8	85	115			
L70303-01AS	AS	07/19/08 19:26	11080708-3	2.5	U	2.834	mg/L	113.4	85	115			
							-				16	20	
L70303-01ASD	ASD	07/19/08 19:30	11080708-3	2.5	U	2.789	mg/L	111.6	85	115	1.6	20	

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FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Nitrate/Nitrite as	N		M353.2 -	H2SO4 pre	eserved								
ACZ ID	Туре	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			
WG247998 CB	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			
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 -	Electromet	ric								
ACZ ID	Туре	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			
L70303-05DUP	DUP	07/10/08 1:06			8.2	8.24	units				0.5	20	
WG247800LCSW12	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	
WG247800LCSW15	LCSW	07/10/08 3:34	PCN29627	6		6.45	units	107.5	90	110			
Potassium, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226 CV	ICV	07/17/08 1:02	11080115-3	20		20.09	mg/L	100.5	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.9	0.9			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	99.76186		112.89	mg/L	113.2	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	99.76186	3	119.3	mg/L	116.6	85	115			MA
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	99.76186	3	117.06	mg/L	114.3	85	115	1.9	20	
Residue, Filterab	le (TDS) @180C	SM25400)									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG247783													
WG247783PBW	PBW	07/09/08 11:35				U	mg/L		- 20	20			
WG247783LCSW	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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
	ICB	07/18/08 6:38		-		U	mg/L		-0.0003	0.0003			
WG248256 CB			M00007444	.05		.04621	mg/L	92.4	85	115			
	LFB	07/18/08 6:50	MS080714-1	.03									
WG248256 CB	LFB AS	07/18/08 6:50 07/18/08 7:01	MS080714-1 MS080714-1	.05	U	.05061	mg/L	101.2	70	130			
WG248256ICB WG248256LFB					U U	.05061 .04894	mg/L mg/L	101.2 97.9	70 70	130 130	3.36	20	
WG248256ICB WG248256LFB L70274-01AS	AS	07/18/08 7:01	MS080714-1	.05			•				3.36	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sodium, dissolv	ed		M200.7 (CP									
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	11080115-3	100		99.57	mg/L	99.6	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.9	0.9			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	98.21624		110.45	mg/L	112.5	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	98.21624	37.2	144.55	mg/L	109.3	85	115			
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	98.21624	37.2	142.44	mg/L	107.2	85	115	1.47	20	
Sulfate			SM4500	SO4-D									
ACZ ID	Туре	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	R
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, dissol	ved		M200.8 I	CP-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		.05319	mg/L	106.4	90	110			
WG248256 CB	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 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248226													
WG248226 CV	ICV	07/17/08 1:02	11080115-3	2		1.9	mg/L	95	95	105			
WG248226 CB	ICB	07/17/08 1:05				U	mg/L		-0.03	0.03			
WG248226LFB	LFB	07/17/08 1:18	11080708-3	.5		536	mg/L	107.2	85	115			
L70303-01AS	AS	07/17/08 2:18	11080708-3	.5	U	.527	mg/L	105.4	85	115			
L70303-01ASD	ASD	07/17/08 2:28	11080708-3	.5	U	524	mg/L	104.8	85	115	0.57	20	

FMI Gold & Copper - Sierrita

ACZ Droi	oot ID.	170202
ACZ Proi	ect ID:	L/U3U3

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70303-01	WG248465	Chromium, dissolved	M200.7 CP	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 CP	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).
	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).
L70303-02	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 CP	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).
L70303-03	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 ∣CP	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).

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		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).

Inorganic Extended Qualifier Report

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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By: Date Printed:

7/3/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
X		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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

Sample Receipt

L70303

FMI Gold & Copper - Sierrita

OJ06DZ

ACZ Project ID: 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	0 < 2	T >12	N/A	RAD	ID
L70303-01	MH-25A		Υ		Υ							
L70303-02	MH-25B		Υ		Υ							
L70303-03	MH-25C		Υ		Υ							
L70303-04	MH-26A		Υ		Υ							
L70303-05	MH-26B		Υ		Υ							
L70303-06	MH-26C		Υ		Υ							
L70303-07	DUP070208A		Υ		Υ							

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:		

	oratories, Inc.	19	H)H	Yr,)	CH	AIN	of Cl	JSTO	DDY
2773 Downhill Drive Steam	boat Springs, CO 80487 (8	00) 334	I-5493								
Report to:							•				
Name: 13:11 Doccis		-			_				ine R	<u>d</u>	
Company: Freeport N	Icillo Kan Sierrita	-	1		Valle.	•					
E-mail: billy-dorrise	@fmi, com		Telep	hone:	520	3 6	48 8	873			
Copy of Report to:											
Name: Dan Simpso.	<u> </u>		E-ma	<u>il: </u>	ans	@ho	ainc.	COV	n		
Name: Dan Simpso. Company: Aydro Ge	o Chem		Telep				_		<u>ξχτ </u>	33	
Invoice to:											
Name:			Addr	Acc.							
Company:		1	Addi	033.							
E-mail:		1	Teler	hone:							
If sample(s) received past ho	olding time (HT), or if insuffic	」 zient HT			mplete	<u> </u>			YES		
analysis before expiration, sh	_				-	•			NO		
If "NO" then ACZ will contact									_		
is indicated, ACZ will proceed	with the requested analyses	s, even									
PROJECT INFORMATION			ANA	ALYSES	REQUE	STED ((attach	list or	use quo	te num	iber)
Quote #:		-	ဖြ								l
Project/PO#: OJø6	DZ	-	of Containers							İ	l
Reporting state for compl	iance testing:	_	onta								l
Sampler's Name:		-	ပို								l
Are any samples NRC licer		<u> </u>	*						<u> </u>		l
SAMPLE IDENTIFICATION	N DATE:TIME	Matrix							<u> </u>	\longrightarrow	
MH-25A	7-2-08 / 9:52	GW	5						$\perp \perp \downarrow$		
MH-25B	7-2-08/ 9:29	GW	5								
MH-25C	7-2-08 / 8:55	GW	5	1	All	7/31	ENT	_	T13		
MH-26A	7-2-08/ 10:51	GW	5								
MH-26B	7-2-08/10:40	6W	5								
MH-26C	7-2-08/ 11:51	GW	5		į						
DUP070208A	7-2-08/	GW	5								
Matrix SW (Surface Water)	- GW (Ground Water) - WW (W	aste Wat	er) · D	W (Drink	ing Wat	er) · SL	(Sludge) · SO	(Soil) - C	L (Oil)	· Other
REMARKS/ SAMPLE DISCL	OSURES										
•	to Dan Simpson	conta	105	only	150	4 ^ /	1250 h	15 6	with		
OC Summary.	,										PAGE
1105 TRACKING +	# 17 867 7E4	2 <i>3</i>	1000	490	94						of
	er to ACZ's terms & cond					arca ci	de of t	hie CC	1 C	L	
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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.

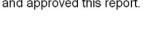
Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

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.



S. Havermehl





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	*	ma/L	0.5	3	07/22/08 21:31	am

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	*	ma/L	0.5	3	07/22/08 22:26	am

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	*	ma/L	0.5	3	07/22/08 22:44	am

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	*	ma/L	0.5	3	07/22/08 23:02	am

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 *	ma/L	0.5	3	07/22/08 23:20	am

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	*	ma/L	0.5	3	07/23/08 16:37	am

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	*	ma/L	1	5	07/23/08 16:55	am

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	am

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	*	ma/L	1	5	07/23/08 17:31	am

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	*	ma/L	1	5	07/23/08 17:49	am

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

Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5 ACZ Project ID: L70337

Sulfate	300.0 - Ion Chron				itography	ography							
ACZ ID	Туре	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			
WG248568 CB	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			

Inorganic Extended Qualifier Report

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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ03Z5

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

Received By:

Date Printed: 7/8/2008

Receipt Verification

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

YES	NO	NA
		Х
		Х
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
		Х
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ03Z5

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70337-01	GV-01-GVDWID-F									Χ		
L70337-02	GV-01-GVDWID									Х		
L70337-03	GV-02-GVDWID-F									Х		
L70337-04	GV-02-GVDWID									Χ		
L70337-05	GV-SI-GVDWID-F									Χ		
L70337-06	GV-SI-GVDWID									Χ		
L70337-07	CC OF GV-F									Χ		
L70337-08	CC OF GV									Χ		
L70337-09	HAVEN GOLF-F									Χ		
L70337-10	HAVEN GOLF									Х		

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:	

	ratories, Inc.	101334	7-(33	39 ₁	1_	CHA	AIN c	of CL	JSTC	DDY
2773 Downhill Drive Steamboa Report to:	it springs, co au4a7 (at	JU) 334	-5495								
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Name: Jan Jimps		1	Addre	ess:	<u> </u>		117	- ^	<u>10</u> 570:		
	Chem Inc.	-	T - 1	· /	ucs.	3// \\ 5 c	11/				
E-mail: dans@hacin	c. Com		Telep	none:	<u>ی پر ر</u>	رحار	13-1	300) x [<u>ىد</u>	
Copy of Report to:				.,	Ų						
Name: Ned Hall/Billy Do	ins Dim Noris	1								fmi.c	
Company: FMT / HO	<u>6L</u>		Telep	hone:	520\2	<u>93-15</u>	DOX!	<u>12/52</u>	<u>0)648</u>	<u> - ধধ্য</u>	?3
Invoice to:											
Name: Ned Hall			Addre	ess:	620) (C	IJ.	Dur	al M	ine i	
Company: FMT			Address: 6200 W. Duval Mine at BBas27 Green Volley, MZ 535627								
E-mail: ned Hull@1	TMT COM	-		hone:							
If sample(s) received past holdi									YES	X	
analysis before expiration, shall	ACZ proceed with request	ted shor	t HT ar	nalyses?	?				NO		1
If "NO" then ACZ will contact cl						ائدر حجدا	ما ا	الدعدا			
is indicated, ACZ will proceed w PROJECT INFORMATION	ith the requested analyses	s, even ı							ise dud	ote num	nber)
	/0		<i>/</i> -(1-(<i>/</i> -	LIGEO	(12-22-2						
Quote #: Sie//ita Sulfa		┨	Sis								
Project/PO #: OT \ 3.	44	-	Containers								
Reporting state for complian	. 1A	1	ont	, ,			:				
	Arneron	-	ofC	O				į			
Are any samples NRC licens	DATE:TIME	Matrix	#								
SAMPLE IDENTIFICATION GV-01-GVDWID-1		GU	1 '	X							
	7-7-04: 8:53	GW	1	X							
GU-O1-GVDWID	7-7-08: 9:41	640	1	X		_					-
GV-02-GVDWID-F	7-7-01: 9:41	60	1								
GV-02-GVDWID		+	1	X							
GV-SI-GVDWID-F			1	X	_	<u> </u>					
GV-SI-GVDWID	7-7-08: 10:30		1								-
CC of GV-F	7-7-08: 12:36			¥							
CC of GV.	7-7-08: 12:36		1								
HAVEN GOLF-F	7-7-08: 13:35	 	1	X			_			-	
HAVENGOLF	フ-フ-O省: 13:35 GW (Ground Water) · WW (W		or) Di		ing Wat	er) . Sl	(Sludge		Soit) . (. Other
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REMARKS/ SAMPLE DISCLOS	SURES										
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Please refer	to ACZ's terms & cond	ditions l	ocate	d on th	e reve	erse si	de of t	his CO	C.	'	
RELINQUISHED BY	: DATE:T	IME				ED BY				ATE:TI	ΜE
	1-7-01	1/4/0	<u> </u>	(5					4g.	089	1955
1/////											

July 29, 2008

Report to:

Dan Simpson

Hvdro 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

S. Habermehl

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		ma/L	0.5	3	07/23/08 21:09	aml

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

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	am

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	am

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		ma/L	0.5	3	07/23/08 22:03	am

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		ma/L	0.5	3	07/23/08 22:57	am

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5 Sample ID: CW-9 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		ma/L	0.5	3	07/23/08 23:16	am

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	am

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

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	am

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		ma/L	10	50	07/28/08 16:43	am

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	am

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	В	mg/L	0.5	3	07/28/08 3:13	aml

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	ma/L	0.5	3	07/28/08 3:31	am

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		ma/L	0.5	3	07/28/08 3:49	am

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

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	am

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	am

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	*	ma/L	10	50	07/25/08 4:02	am

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

Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5 ACZ Project ID: L70408

ACZ ID					tography								
	Туре	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	СВ	07/23/08 19:02				U	mg/L		-1.5	1.5			
WG248573LFB L	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	СВ	07/24/08 20:29				U	mg/L		-1.5	1.5			
WG248704LFB L	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													
WG248877 CV	ICV	07/28/08 1:06	WI080521-1	50.1		53.46	mg/L	106.7	90	110			
WG248877ICB	СВ	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			

Page 19 of 25 REPIN.01.06.05.01

METHOD

300.0 - Ion Chromatography 300.0 - Ion Chromatography

300.0 - Ion Chromatography

300.0 - Ion Chromatography

Inorganic Extended
Qualifier Report

FMI Gold & Copper - Sierrita

WG248704 Sulfate

L70408-16 WG248704 Sulfate

ACZ ID

L70408-15

WORKNUM PARAMETER

QI	UAL	DESCRIPTION
	D1	Sample required dilution due to matrix.
	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	D1	Sample required dilution due to matrix.

M2 Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

ACZ Project ID: L70408

REPAD.15.06.05.01

FMI Gold & Copper - Sierrita

ACZ Project ID: L70408

No certification qualifiers associated with this analysis



Sample Receipt

FMI Gold & Copper - Sierrita

OJ03Z5

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

Received By:

Date Printed: 7/10/2008

Receipt Verification

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

YES	NO	NA
		Х
		Χ
		Χ
Х		
Х		
Х		
Х		
Х		
Х		
		Х
		Х
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ03Z5

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L70408-01	CW-10F				·		·			Χ		
L70408-02	CW-10									Χ		
L70408-03	CW-6F									Х		
L70408-04	CW-6									Х		
L70408-05	CW-9F									Х		
L70408-06	CW-9									Х		
L70408-07	CW-8F									Х		
L70408-08	CW-8									Х		
L70408-09	DUP-070808F									Х		
L70408-10	DUP-070808									Х		
L70408-11	EQB-070808									Х		
L70408-12	FB-070808									Х		
L70408-13	TMM-1F									Х		
L70408-14	TMM-1									Х		
L70408-15	CW-7F									Χ		
L70408-16	CW-7									Χ		

Sample Container Preservation Legend

cription	Container Type	Preservative/Limits
Nitric (Nitric	RED	pH must be < 2
ed/Sulfuric	BLUE	pH must be < 2
ed/Nitric	BLACK	pH must be < 2
ed/Nitric	GREEN	pH must be < 2
/Sulfuric	ORANGE	pH must be < 2
/NaOH	PURPLE	pH must be > 12 *
NaOH _Zinc Acetate	TAN	pH must be > 12
/Sulfuric	YELLOW	pH must be < 2
/Sulfuric	YELLOW GLASS	pH must be < 2
reservative needed	Not applicable	
ma/Beta dose rate	Not applicable	must be $< 250 \ \mu R/hr$
	cription /Nitric red/Sulfuric red/Nitric red/Nitric /Sulfuric /NaOH /NaOH _Zinc Acetate /Sulfuric /Sulfuric /Sulfuric /Sulfuric /Sulfuric reservative needed ma/Beta dose rate	Nitric RED red/Sulfuric BLUE red/Nitric BLACK red/Nitric GREEN /Sulfuric ORANGE /NaOH PURPLE /NaOH_Zinc Acetate TAN /Sulfuric YELLOW /Sulfuric YELLOW GLASS reservative needed Not applicable

^{*} pH check performed by analyst prior to sample preparation

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ACZ Labo	ratories, Inc.		7)41	18		СНА	IN of (CLIST	ארט ייט
2773 Downhill Drive Steambo	oat Springs, CO 80487 (<u>800)</u> 33	4-549	3						
Report to:										
Name: Dan Simp	son		Add	ress:	.51	W.	18/07	more	DI	_
	teo Chem Inc.				Time	-20	AZ	85	<u> </u>	
E-mail: danswha		7	Tala	nhone	(520)	7011,	2-10	00 x1	700	
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Company: FMI HG	Hall/Billy Dorris	-	E-ma	ر نا: ail:	naph	gcinc	. com/	Ally-do	is@f	mi.co
			Tele	phone:	520)29	3-1500	XIIZ	520)648	<u>-8873</u>	<u> </u>
Invoice to:			_							
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E-mail: ned-hall@			Tele	<u>oh</u> one:						
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analysis before expiration, shall	ACZ proceed with reques	sted sho	rt HT a	nalyses	?			NO		
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CW-6F	7-8-08: 9:47	64	1	×					_	
CW-6	7-8-08: 10:30	GW	!	X			_			
CW-9F	7-8-08'.	GW		X						
CW-9	7-8-08: 11:45	64		X			_ -			
	7-8-08: 11:35		!	X						
CW-8F	7-8-08: 12:33	1 [1	X	-					
100-8	7-8-02: 13:33			X			_			
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DUP ~ 070909 Matrix SW (Surface Water) · G	7-8-08!	600	1	X						
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ACZ Labo 2773 Downhill Drive Steamboo	ratories, Inc. at Springs, CO 80487 (8			Œ)		CH	AIN	of C	UST	ODY
Report to:											
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E-mail:	JOHN O	ر ا	Telep	phone:		<u>l</u>					
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FB-070808	7-8-08	6W	1	×							
TMM-1F	7-9-08:10:48		1	X							
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(W-7F	7-8-08: 13:18	(44)	1	X							
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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.

S. Habermehl





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

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

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

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	am

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

Report H		

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

Inorganic QC Summary

FMI Gold & Copper - Sierrita

Project ID: OJ03Z5

ACZ Project ID: L70455

Sulfate			300.0 - Ior	Chroma	itography								
ACZ ID	Туре	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			
WG248704 CB	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			M

Page 7 of 12

Inorganic Extended Qualifier Report

ACZ Project ID: L70455

FMI Gold & Copper - Sierrita

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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ03Z5

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

Received By:

Date Printed: 7/12/2008

Receipt Verification

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

NO	NA
	Х
	Х
	Х
	Х
	Х
	Х
	Х
	NO

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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ03Z5

ACZ Project ID: Date Received:

L70455 7/12/2008

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70455-01	CW-3F									Χ		
L70455-02	CW-3									Х		
L70455-03	NP-2F									Х		
L70455-04	NP-2									Х		

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:	
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Report to: Name: Annal Symposon Company: Hydro (reo Chem Tric E-mail: danso hegaine.com Copy of Report to: Name: Jan Norright Hall Bully Dorris Company: HG- FmT Invoice to: Name: Ned Hyll Company: Fm P Address: G-200 June Mine Rd Polass 2 (free heldes, 17 856 22 Irelephone: 529) 273-/500 Sept 4-8173 Invoice to: Name: Ned Hyll Company: Fm P Polass 2 (free heldes, 17 856 22 Irelephone: 520) 273-/500 Sept 4-8173 If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? If Nov' then Act will contact client for further instruction. In relative Test' nor "No" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. PROJECT INFORMATION Quote #: Sieri ra Sulfacte Project/PO #: O JO 3 Z S Reporting state for compliance testing: Sampler's Name: Mark Araceson Are any samples NRC licensable material? SAMPLE IDENTIFICATION DATE:TIME Matrix SW (Surface Water) - GW (Ground Water) - WW (Wasta Water) - DW (Drinking Water) - SL (Studge) - SO (Soil) - OL (Oil) - Other REMARKS/ SAMPLE DISCLOSURES Please refer to ACZ's terms & conditions located on the reverse side of this COC. RELINOURS HED BY: DATE:TIME PLAGE PLAGE PAGE PAG	ACZ 2773 Downhill Drive	Laboratories Steamboat Springs, CC		34-5493	165	CHAIN	of CUSTOD
Copy of Report to: Name: Tim Moris (Mid Half / Billy David) Telephone: \$20 273:7500 \$20 446-8873 Invoice to: Name: Nat Half Company: HMT E-mail: \(\text{invaling fine}\) Address: \(\text{6200}\) \(\text{David Mine}\) Rd Company: \(\text{FMT}\) Report to seem of the first of the firs	Name: Jan Company: Ayo	to Geo Chen		_	Tucse	n,AZ	85708
Name: Ned Hall Company: FM 7: E-mail: Ne) hall@ Fm. cem If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? If "NO" then ACZ will proceed with the requested short HT analyses? If "NO" then ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified. PROJECT INFORMATION Quote #: Sierting Sulfade Project/PO #: OU 3 Z 5 Reporting state for compliance testing: Sampler's Name: Mark Proses Are any samples NRC licensable material? SAMPLE IDENTIFICATION DATE:TIME Matrix SW (Surface Water) • GW (Ground Water) • WW (Waste Water) • DW (Drinking Water) • SL (Sludge) • SO (Soil) • OL (Oil) • Other REMARKS/ SAMPLE DISCLOSURES Project For to ACZ's terms & conditions located on the reverse side of this COC. RELINQUISHED BY: DATE:TIME RECEIVED BY: DATE:TIME RECEIVED BY: DATE:TIME RECEIVED BY: DATE:TIME	Copy of Report to Name: Tim Non Company: HG	is/Ned Hall /Bill	-	E-mail: ,)imal hejcio	k.com/bil	ly-domis@Fmi.
PROJECT INFORMATION Quote #: \$\sigma_{eff} \forall_{eff}	Name: Ned Ha Company: FM E-mail: Ned ha If sample(s) receive analysis before expi	T MOFm, com d past holding time (HT) ration, shall ACZ proceed	l with requested sh	Telepho T remains t ort HT analy	ne: 520)64 o complete yses?	en Valley,	42 85622 YES X
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Please refer to ACZ's terms & conditions located on the reverse side of this COC. RELINQUISHED BY: DATE:TIME PAGE Only Only PAGE DATE:TIME	NP-2F NP-2	7-11-08 7-11-08	10:35 64 13:15 64	- 1 2 - 1 3	Ž .		
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Please refer to ACZ's terms & conditions located on the reverse side of this COC. RELINQUISHED BY: DATE:TIME RECEIVED BY: DATE:TIME			ater) · WW (Waste W	rater) - DW (Drinking Wat er)・	SL (Sludge) - So	O (Soil) · OL (Oil) · Oth
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			DATE:TIME				



Analytical Report

July 29, 2008

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

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

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.

S. Havermehl





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		ma/L	10	50	07/17/08 10:31	tbd

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		ma/L	10	50	07/17/08 10:35	tbd

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

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rkebort	Header	EXD	lanations

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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

WG2484654 PBW G72:1081425 S	Alkalinity as CaC	:03		SM2320B	- Titration	l								
MCG48454CSN2	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
MC24464CLSN/L Color O772108 1437 WC080702-8 820 457 4578 mg/L	WG248454													
1.70594/701PW	WG248454PBW1	PBW	07/21/08 14:25				25.3	mg/L		-20	20			В4
WG248464P8W12	WG248454LCSW2	LCSW	07/21/08 14:37	WC080702-8	820		786	mg/L	95.9	90	110			
MG248454CBMB	L70504-07DUP	DUP	07/21/08 16:10			457	457.6	mg/L				0.1	20	
WG24845EBW3 PBW	WG248454PBW2	PBW	07/21/08 17:31				U	mg/L		-20	20			
WG24845FLCSWB CSW O72108 20.55 WC080702-8 820 788 2 mg/L 962 90 110 20 20 20 WC24845FBW14 CSW O72208 3.39 WC080702-8 820 798.5 mg/L 97.2 90 110 5 5 5 5 5 5 5 5 5	WG248454LCSW5	LCSW	07/21/08 17:44	WC080702-8	820		789.7	mg/L	96.3	90	110			
WG24846FBPW4	WG248454PBW3	PBW	07/21/08 20:42				U	mg/L		-20	20			
M2248454LCSW11 LCSW 07/22/08 0.27 WC080702-8 820 798.5 mgl. 97.2 90 110 1	WG248454LCSW8	LCSW	07/21/08 20:55	WC080702-8	820		789.2	mg/L	96.2	90	110			
Magninum, dissolver Magninum, dissolver	WG248454PBW4	PBW	07/22/08 0:15				U	mg/L		-20	20			
Aluminum, disəlwit M200.7 CP ACZ ID 19pe Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual WG248737 WG2487371CN CV 07/24/08 2.2.23 1080717-3 2 2.089 mgl. 10.3.5 9.5 10.5 1	WG248454LCSW11	LCSW	07/22/08 0:27	WC080702-8	820		796.8	mg/L	97.2	90	110			
MC248737 MC2487 MC248737 MC248	WG248454LCSW14	LCSW	07/22/08 3:39	WC080702-8	820		798.5	mg/L	97.4	90	110			
WG2487371CV ICV O7/24/08 22:29 11080717-3 2 2.069 mg/L 103.5 95 105	Aluminum, disso	lved		M200.7 IC	:P									
WG2487371CV ICV 07/24/08 22.29 1080717-3 2 2.069 mg/L 103.5 95 105 105 VG2487371CP ICB 07/24/08 22.48 1080708-3 1 1.097 mg/L 109.7 85 115	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737CB	WG248737													
WG248594 WG248	WG248737ICV	ICV	07/24/08 22:29	11080717-3	2		2.069	mg/L	103.5	95	105			
LT0485-06AS AS 07/24/08 23:47 1080708-3 1 0.03 1.116 mg/L 108.6 85 115 2.74 20 Antimony, dissolvet M200.8 CP-MS ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual W6248594 (V ICV 07/25/08 6.23 MS080722-4 0.2006 0.0015 mg/L 0.0012 0.0013 0.0014 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0014 0.0014 0.0014 0.0014 0.0014 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0015 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014 0.0015 0.	WG248737ICB	ICB	07/24/08 22:33				.055	mg/L		-0.09	0.09			
March Mar	WG248737LFB	LFB	07/24/08 22:48	11080708-3	1		1.097	mg/L	109.7	85	115			
Antimony, dissolved M200.8 ICP-MS ACZ ID Yge Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual WG248594 WG248594CV ICV 07(25/08 6.23 MS080722-4 0.0006	L70485-06AS	AS	07/24/08 23:47	11080708-3	1	.03	1.116	mg/L	108.6	85	115			
Mg248594 WG248594 CV CV O7/25/08 6.23 MS080722-4 O2006 O2152 mg/L O10.2 O2001 O2	L70485-06ASD	ASD	07/24/08 23:51	11080708-3	1	.03	1.147	mg/L	111.7	85	115	2.74	20	
WG248594 WG248594 CV ICV 07/25/08 6.23 MS08072-4 0.2006 0.2152 mg/L 107.3 90 110 1	Antimony, dissol	ved		M200.8 IC	P-MS									
WG248594 CV ICV O7/25/08 6:23 MS080722-4 O2006 O2152 mg/L O7.3 90 110 O7.5 O7/25/08 6:29 O7/25/08 6:29 O7/25/08 6:29 O7/25/08 6:29 O7/25/08 6:41 MS080714-1 O.1 O.10044 mg/L O1.4 85 115 O7/25/08 6:41 MS080714-1 O.1 U O1012 mg/L O1.2 70 130 O7/25/08 8:16 MS080714-1 O.1 U O1012 mg/L O1.4 70 130 O.8 O7/25/08 8:21 MS080714-1 O.1 U O1041 mg/L O1.4 70 O1.5 O.8 O7/25/08 8:21 MS080714-1 O.1 U O1041 mg/L O1.4 70 O1.5 O.8 O7/25/08 8:21 MS080714-1 O.1 U O1041 mg/L O1.4 O7 O1.5 O7/25/08 8:21 O7/25/0	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594 CB	WG248594													
WG248594LFB	WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.02006		.02152	mg/L	107.3	90	110			
Arsenic, dissolvet	WG248594 CB	ICB	07/25/08 6:29				.00051	mg/L		-0.0012	0.0012			
Arsenic, dissolvet	WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.01		.01044	mg/L	104.4	85	115			
Arsenic, dissolved M200.8 ICP-MS ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual WG248594 WG248594 CV ICV 07/25/08 6:23 MS080722-4 0.5 0.5414 mg/L 108.3 90 110 WG248594 CB ICB 07/25/08 6:29 U mg/L -0.0015 0.0015 WG248594 CB ICB 07/25/08 6:29 U mg/L 109 85 115 L70443-01AS AS 07/25/08 8:16 MS080714-1 0.5 0.044 0.6101 mg/L 113.2 70 130 L70443-01AS AS 07/25/08 8:21 MS080714-1 0.5 0.044 0.6101 mg/L 113.2 70 130 L70443-01ASD ASD 07/25/08 8:21 MS080714-1 0.5 0.044 0.6128 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 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 103.7 95 105 WG248737ICB ICB 07/24/08 22:38 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	L70443-01AS	AS	07/25/08 8:16	MS080714-1	.01	U	.01012	mg/L	101.2	70	130			
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper RPD Limit Qual WG248594 WG248594(CV ICV 07/25/08 6:23 MS080722-4 .05 .05414 mg/L 108.3 90 110	L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.01	U	01041	mg/L	104.1	70	130	2.83	20	
WG248594 WG248594 CV	Arsenic, dissolve	ed		M200.8 IC	P-MS									
WG248594 CV ICV 07/25/08 6:23 MS080722-4 .05 .05414 mg/L 108.3 90 110	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594 CB	WG248594													
WG248594 CB	WG248594ICV	ICV	07/25/08 6:23	MS080722-4	.05		.05414	mg/L	108.3	90	110			
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	WG248594ICB							-			0.0015			
M200.7 CP M200.7 CP	WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.05452	_	109	85	115			
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	L70443-01AS	AS	07/25/08 8:16	MS080714-1	.05	.0044	.06101	mg/L	113.2	70	130			
WG248737 ICV 07/24/08 22:29 IIO80717-3 2 2.0743 mg/L 103.7 95 105 WG248737ICB ICB 07/24/08 22:48 IIO80708-3 5 .5059 mg/L 101.2 85 115 LF0485-06AS AS 07/24/08 23:47 IIO80708-3 .5 .007 .5078 mg/L 100.2 85 115	L70443-01ASD	ASD	07/25/08 8:21	MS080714-1	.05	.0044	.06128	mg/L	113.8	70	130	0.44	20	
WG248737 WG248737 CV ICV 07/24/08 22:29 II080717-3 2 2.0743 mg/L 103.7 95 105 WG248737 CB 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	Barium, dissolve	d		M200.7 IC	;P									
WG248737 CV ICV 07/24/08 22:29 II080717-3 2 2.0743 mg/L 103.7 95 105 WG248737 CB 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	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
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	WG248737													
WG248737LFB LFB 07/24/08 22:48 080708-3	WG248737 CV	ICV	07/24/08 22:29	11080717-3	2		2.0743	mg/L	103.7	95	105			
WG248737LFB LFB 07/24/08 22:48 080708-3	WG248737 CB	ICB	07/24/08 22:33				U	mg/L		-0.009	0.009			
	WG248737LFB	LFB	07/24/08 22:48	11080708-3	.5		.5059	mg/L	101.2	85	115			
L70485-06ASD ASD 07/24/08 23:51 080708-3 .5 .007 .508 mg/L 100.2 85 115 0.04 20	L70485-06AS	AS	07/24/08 23:47	11080708-3		.007	5078	_	100.2	85	115			
	L70485-06ASD	ASD	07/24/08 23:51	11080708-3	.5	.007	.508	mg/L	100.2	85	115	0.04	20	

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

FMI Gold & Copper - Sierrita

L70485-08ASD

ASD

07/25/08 17:29 ||080724-3

Project ID:	0	J06DZ							. 5,551.12	. . .	,		
Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG248594 CB	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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG248594 CB	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, disso	lved		M200.7 I	CP									-
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	11080717-3	100		99.26	mg/L	99.3	95	105			
WG248802 CB	ICB	07/25/08 17:07				U	mg/L		-0.6	0.6			
WG248802LFB	LFB	07/25/08 17:19	11080724-3	67.97008		77.22	mg/L	113.6	85	115			
L70485-08AS	AS	07/25/08 17:26	11080724-3	67.97008	21.6	96.68	mg/L	110.5	85	115			
L70485-08ASD	ASD	07/25/08 17:29	11080724-3	67.97008	21.6	93.6	mg/L	105.9	85	115	3.24	20	
Chloride			SM45000	CI-E									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248487													
WG248487 CB	ICB	07/21/08 11:30				U	mg/L		-3	3			
WG248487 CV	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, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802ICV	ICV	07/25/08 17:03	11080717-3	2		1.98	mg/L	99	95	105			
WG248802 CB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	11080724-3	.5		529	mg/L	105.8	85	115			
L70485-08AS	AS	07/25/08 17:26	11080724-3	.5	U	.52	mg/L	104	85	115			
. = 0 . 0 = 0 0 . 0 =		0010010010		_		_							

U

.5

mg/L

100

85

115

3.92 20

.5

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Cobalt, dissolved	<u> </u>		M200.7 IC										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802 CV	ICV	07/25/08 17:03	11080717-3	2		1.93	mg/L	96.5	95	105			
WG248802 CB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	11080724-3	.5		522	mg/L	104.4	85	115			
L70485-08AS	AS	07/25/08 17:26	11080724-3	.5	U	.511	mg/L	102.2	85	115			
_70485-08ASD	ASD	07/25/08 17:29	11080724-3	.5	U	502	mg/L	100.4	85	115	1.78	20	
Conductivity @25	SC .		SM2510B										
ACZ ID	Туре	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	umhos/cm	103.6	90	110			
L70504-07DUP	DUP	07/21/08 16:10			3240	3250	umhos/cm				0.3	20	
WG248454LCSW4	LCSW	07/21/08 17:33	PCN29501	1408.8		1456	umhos/cm	103.4	90	110			
WG248454LCSW7	LCSW	07/21/08 20:44	PCN29501	1408.8		1455	umhos/cm	103.3	90	110			
WG248454LCSW10	LCSW	07/22/08 0:16	PCN29501	1408.8		1455	umhos/cm	103.3	90	110			
WG248454LCSW13	LCSW	07/22/08 3:29	PCN29501	1408.8		1453	umhos/cm	103.1	90	110			
Copper, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737 CV	ICV	07/24/08 22:29	11080717-3	2		1.984	mg/L	99.2	95	105			
WG248737 CB	ICB	07/24/08 22:33				U	mg/L		-0.03	0.03			
WG248737LFB	LFB	07/24/08 22:48	11080708-3	.5		.503	mg/L	100.6	85	115			
L70485-06AS	AS	07/24/08 23:47	11080708-3	.5	U	.5	mg/L	100	85	115			
L70485-06ASD	ASD	07/24/08 23:51	11080708-3	.5	U	504	mg/L	100.8	85	115	0.8	20	
Cyanide, total			M335.4 - (Colorimetr	ic w/ distil	ation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248577													
WG248577 CV	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	00.0	-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	ı
L70487-02LFM	LFM	07/22/08 15:41	WI080711-2	.2	U	.185	mg/L	92.5	90	110			
Fluoride			SM4500F	-C									
ACZ ID	Туре	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			
			5557 . 5 0	-		5.00							
L70476-02AS	AS	07/17/08 15:53	WC080716-3	5	.4	5.03	mg/L	92.6	90	110			

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Iron, dissolved			M200.7 (CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248802													
WG248802ICV	ICV	07/25/08 17:03	11080717-3	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	11080724-3	1		1.082	mg/L	108.2	85	115			
L70485-08AS	AS	07/25/08 17:26	11080724-3	1	U	1.059	mg/L	105.9	85	115			
_70485-08ASD	ASD	07/25/08 17:29	11080724-3	1	U	1.022	mg/L	102.2	85	115	3.56	20	
Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248594													
WG248594 CV	ICV	07/25/08 6:23	MS080722-4	.05		05155	mg/L	103.1	90	110			
WG248594 CB	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, dis	solved		M200.7 (CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248737													
WG248737 CV	ICV	07/24/08 22:29	11080717-3	100		100.42	mg/L	100.4	95	105			
WG248737 CB	ICB	07/24/08 22:33				U	mg/L		-0.6	0.6			
WG248737LFB	LFB	07/24/08 22:48	11080708-3	49.96908		53.29	mg/L	106.6	85	115			
L70485-06AS	AS	07/24/08 23:47	11080708-3	49.96908	9.1	61.84	mg/L	105.5	85	115			
L70485-06ASD	ASD	07/24/08 23:51	11080708-3	49.96908	9.1	62.62	mg/L	107.1	85	115	1.25	20	
Manganese, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248737													
WG248737 CV	ICV	07/24/08 22:29	11080717-3	2		2.0637	mg/L	103.2	95	105			
WG248737 CB	ICB	07/24/08 22:33				U	mg/L		-0.015	0.015			
WG248737LFB	LFB	07/24/08 22:48	11080708-3	.5		5374	mg/L	107.5	85	115			
L70485-06AS	AS	07/24/08 23:47	11080708-3	.5	U	.5263	mg/L	105.3	85	115			
L70485-06ASD	ASD	07/24/08 23:51	11080708-3	.5	U	5324	mg/L	106.5	85	115	1.15	20	
Mercury, dissol	ved		M245.1 C	VAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG248205													
WG248205 CV	ICV	07/16/08 19:00	11080624-3	.00501		.00519	mg/L	103.6	95	105			
WG248205 CB	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	11080711-8	.002		.00203	mg/L	101.5	85	115			
L70472-01LFM	LFM	07/16/08 19:47	11080711-8	.002	U	.002	mg/L	100	85	115			
	LFMD	07/16/08 19:49	11080711-8	.002	U	.00193	mg/L	96.5	85	115	3.56	20	

(800) 334-5493

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Project ID: OJ06DZ

Molybdenum, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802 CV	ICV	07/25/08 17:03	11080717-3	2		2.001	mg/L	100.1	95	105			
WG248802 CB	ICB	07/25/08 17:07				U	mg/L		-0.03	0.03			
WG248802LFB	LFB	07/25/08 17:19	11080724-3	.5		.56	mg/L	112	85	115			
_70485-08AS	AS	07/25/08 17:26	11080724-3	.5	U	.532	mg/L	106.4	85	115			
_70485-08ASD	ASD	07/25/08 17:29	11080724-3	.5	U	.517	mg/L	103.4	85	115	2.86	20	
Nickel, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248802													
WG248802 CV	ICV	07/25/08 17:03	11080717-3	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	11080724-3	.5		.537	mg/L	107.4	85	115			
_70485-08AS	AS	07/25/08 17:26	11080724-3	.5	.01	.561	mg/L	110.2	85	115			
_70485-08ASD	ASD	07/25/08 17:29	11080724-3	.5	.01	.536	mg/L	105.2	85	115	4.56	20	
Nitrate/Nitrite as	N		M353.2 -	H2SO4 pre	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248688													
WG248688 CV	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	33.5	-0.06	0.06			
WG248688LFB1	LFB	07/23/08 21:32	WI080312-1	2		1.994	mg/L	99.7	90	110			
_70487-01AS	AS	07/23/08 21:34	WI080312-1	2	1.08	3.172	mg/L	104.6	90	110			
_70487-02DUP	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			
oH (lab)			M150.1 -	Electromet	tric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454													
VG248454LCSW3	LCSW	07/21/08 14:41	PCN29627	6		6.57	units	109.5	90	110			
.70504-07DUP	DUP	07/21/08 16:10		· ·	7.8	7.82	units				0.3	20	
VG248454LCSW6	LCSW	07/21/08 17:47	PCN29627	6		6.57	units	109.5	90	110	0.0		
VG248454LCSW9	LCSW	07/21/08 20:59	PCN29627	6		6.56	units	109.3	90	110			
WG248454LCSW12		07/22/08 0:30	PCN29627	6		6.46	units	107.7	90	110			
WG248454LCSW15		07/22/08 3:43	PCN29627	6		6.45	units	107.5	90	110			
Potassium, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737 CV	ICV	07/24/08 22:29	11080717-3	20		20.89	mg/L	104.5	95	105			
WG248737ICB	ICB	07/24/08 22:33				U	mg/L	. 54.0	-0.9	0.9			
WG248737LFB	LFB	07/24/08 22:48	11080708-3	99.76186		110.6	mg/L	110.9	85	115			
_70485-06AS	AS	07/24/08 23:47	11080708-3	99.76186	.5	113.63	mg/L	113.4	85	115			
		5.7.E 1,50 E5. 17		555100	.0		9, ⊏		50	. 10			

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

	Summar
ACZ Project ID:	L70487

Residue, Filteral	ble (TDS) @180C	SM2540C	:									
ACZ ID	Туре	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, disso	lved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594 CV	ICV	07/25/08 6:23	MS080722-4	.05		.05277	mg/L	105.5	90	110			
WG248594 CB	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, dissolv	red		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737ICV	ICV	07/24/08 22:29	11080717-3	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	11080708-3	98.21624		107.38	mg/L	109.3	85	115			
L70485-06AS	AS	07/24/08 23:47	11080708-3	98.21624	9	115.3	mg/L	108.2	85	115			
L70485-06ASD	ASD	07/24/08 23:51	11080708-3	98.21624	9	116.13	mg/L	109.1	85	115	0.72	20	
Sulfate			SM4500 \$	SO4-D									
ACZ ID	Туре	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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594 CV	ICV	07/25/08 6:23	MS080722-4	.05		.0545	mg/L	109	90	110			
WG248594ICB	ICB	07/25/08 6:29		30		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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248594													
WG248594 CV	ICV	07/25/08 6:23	MS080722-4	.05		.05297	mg/L	105.9	90	110			
	ICP	07/25/08 6:29				U	mg/L		-0.0003	0.0003			
WG248594ICB	ICB												
WG248594ICB WG248594LFB	LFB	07/25/08 6:41	MS080714-1	.05		.05146	mg/L	102.9	85	115			
		07/25/08 6:41 07/25/08 8:16	MS080714-1 MS080714-1	.05 .05	.0038	.05146	mg/L mg/L	102.9 115.9	85 70	115 130			
WG248594LFB	LFB				.0038		_				0.6	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ ACZ Project ID: L70487

Zinc, dissolved			M200.7 IC	P									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248737													
WG248737 CV	ICV	07/24/08 22:29	11080717-3	2		1.995	mg/L	99.8	95	105			
WG248737 CB	ICB	07/24/08 22:33				U	mg/L		-0.03	0.03			
WG248737LFB	LFB	07/24/08 22:48	11080708-3	.5		.528	mg/L	105.6	85	115			
L70485-06AS	AS	07/24/08 23:47	11080708-3	.5	U	.526	mg/L	105.2	85	115			
L70485-06ASD	ASD	07/24/08 23:51	11080708-3	.5	U	.533	mg/L	106.6	85	115	1.32	20	

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: L70487

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70487-01	WG248487	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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	В4	Target analyte detected in blank at or above the acceptance criteria.
L70487-02	WG248487	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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	В4	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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Date Printed: 7/15/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	7	emp (°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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70487-01	PZ-7		Υ		Υ							
L70487-02	DUP071108A		Υ		Υ							

Sample Container Preservation Legend

Description	Container Type	Preservative/Limits
Raw/Nitric	RED	pH must be < 2
Filtered/Sulfuric	BLUE	pH must be < 2
Filtered/Nitric	BLACK	pH must be < 2
Filtered/Nitric	GREEN	pH must be < 2
Raw/Sulfuric	ORANGE	pH must be < 2
Raw/NaOH	PURPLE	pH must be > 12 *
Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Raw/Sulfuric	YELLOW	pH must be < 2
Raw/Sulfuric	YELLOW GLASS	pH must be < 2
No preservative needed	Not applicable	
Gamma/Beta dose rate	Not applicable	must be < 250 $\mu R/hr$
	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric Raw/Sulfuric Raw/NaOH Raw/NaOH Zinc Acetate Raw/Sulfuric Raw/Sulfuric No preservative needed	Raw/Nitric RED Filtered/Sulfuric BLUE Filtered/Nitric BLACK Filtered/Nitric GREEN Raw/Sulfuric ORANGE Raw/NaOH PURPLE Raw/NaOH Zinc Acetate TAN Raw/Sulfuric YELLOW Raw/Sulfuric YELLOW GLASS No preservative needed Not applicable

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:		

2773 Downhill Drive Stean	Doratories, Inc. aboat Springs, CO 80487 (800) 33	4-5493	7	87	C	HAIN	of Cl	JST	ODY
Report to: Name: Bill Dorri Company: Freeport E-mail: billy dorri	McMoRan Sierrit	(a	6	reen	Valley	1 Duva 1, AZ	856	14	/	
Copy of Report to:										
Name: Dan Simps	501		E-ma	il: dc	115Q	hginc.	Com			
Company: Hydro Geo	Chem		Telep	hone:	520.	-293-1	500 1	Ext/3	3	
Invoice to:										
Name:			Addr	ess:						
Company:				. <u> </u>						
E-mail:				hone:			- · · · · · · · · · · · · · · · · · · ·	·	·	
analysis before expiration, s If "NO" then ACZ will contact	olding time (HT), or if insuff hall ACZ proceed with reque it client for further instruction d with the requested analyse	sted sho on. If nei	rt HT a ther "Y	nalyses ES" no	s? r "NO"	ata will ha	auslified	YES NO		
PROJECT INFORMATION	a with the requested analysis	05, 67611				TED (attac			te num	nber)
Quote #:			40	w	2					
Project/PO#: OJø6	, D 2		ners	18	200					
Reporting state for comp	liance testing:		of Containers	F	m D1550L					
Sampler's Name:			8	15/1	12/1				İ	
Are any samples NRC lice			##	100	URANIUM METAL - O					
SAMPLE IDENTIFICATIO		Matrix	· · · · · · · · · · · · · · · · · · ·	A.	26					
PZ-7	7-11-08/10:20	GW	5	×	X		_		-	
DUPO71108A	7-11-08	6W	5	X	X	-	-	-		
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		 					-	+ +		
Matrix SW (Surface Water)) - GW (Ground Water) - WW (V	Vaste Wat	er) · DV	V (Drink	ing Water	i) • SL (Slud	ge) - SO	(Soil) - O	L (Oil)	· Other
REMARKS/ SAMPLE DISCL										
Copy of Report to	Dan Simpson con	tains	only	"50	y" 1es	suts v	ith (QC 50	שות חונ	14.
	third report con to Rick Smith. 6 # 12 867 7E4 fer to ACZ's terms & cond	Rick_ 1 23 i	.5mi 000	th @ 5510	UR5(orp.Com	٠,			PAGE of
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Analytical Report

August 01, 2008

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

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

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.

S. Habermehl





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FMI Gold & Copper - Sierrita

ACZ Sample ID: L70527-01 Project ID: OJ06DZ Date Sampled: 07/15/08 13:55

Sample ID: IW-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	1730		mg/L	10	50	07/17/08 17:33	kah

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	aki

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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		ma/L	10	50	07/21/08 9:30	aki

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Project ID: OJ06DZ

Sample ID: IW-18 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 SQ4-D	1710		ma/L	10	50	07/17/08 17:48	kah

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ACZ Sample ID: **L70527-05** Project ID: OJ06DZ Date Sampled: 07/15/08 12:33

Sample ID: IW-19 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	aki

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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	aki

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Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

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Project ID: OJ06DZ

Alkalinity as CaC	O3		SM2320B	- Titration	1								
ACZ ID	Туре	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, disso	lved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816 CV	ICV	07/26/08 17:42	11080717-3	2		2.022	mg/L	101.1	95	105			
WG248816 CB	ICB	07/26/08 17:46		_		U	mg/L		-0.09	0.09			
WG248816LFB	LFB	07/26/08 17:58	11080724-3	1		1.149	mg/L	114.9	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	1	.21	1.311	mg/L	110.1	85	115			
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	1	.21	1.279	mg/L	106.9	85	115	2.47	20	
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596 CV	ICV	07/25/08 20:56	MS080722-4	.02006		.02117	mg/L	105.5	90	110			
WG248596 CB	ICB	07/25/08 21:02		.02000		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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596ICV	ICV	07/25/09 20:50	MS090700 4	0.F		0E2	ma/l	106	00	110			
WG248596ICV WG248596ICB	ICV	07/25/08 20:56 07/25/08 21:02	MS080722-4	.05		.053 U	mg/L mg/L	106	90 -0.0015	110 0.0015			
WG248596LFB	LFB	07/25/08 21:02	MS080714-1	.05		.05365	mg/∟ mg/L	107.3	-0.0015 85	115			
L70527-01AS	AS	07/25/08 21:14	MS080714-1 MS080714-1	.05	.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, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	11080717-3	2		1.9875	mg/L	99.4	95	105			
WG248816 CB	ICB	07/26/08 17:46				U	mg/L		-0.009	0.009			
WG248816LFB	LFB	07/26/08 17:58	11080724-3	.5		.5119	mg/L	102.4	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	.5	.038	.5672	mg/L	105.8	85	115			
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	.5	.038	.5754	mg/L	107.5	85	115	1.44	20	

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Project ID: OJ06DZ

Tuno												
Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ICV	07/25/08 20:56	MS080722-4	.05		.04979	mg/L	99.6	90	110			
						-						
		MS080714-1	05005				97.5					
				П		•						
ASD		MS080711-1		U		-		70		1.3	20	
lved		M200.8 IC										
Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ICV	07/25/09 20:56	MS080722 4	05		05002	ma/l	101 0	00	110			
		WI3000122-4	.00			•	101.0					
		MC0007444	0.5			-	104.4					
						•						
						•						
ASD	07/25/08 22:52	MS080714-1	.1	U	.09748	mg/L	97.5	70	130	1.22	20	
ed		M200.7 IC	P									
Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ICV	07/26/08 17:42	11080717-3	100		99.47	mg/L	99.5	95	105			
ICB	07/26/08 17:46				U	mg/L		-0.6	0.6			
LFB	07/26/08 17:58	11080724-3	67.97008			•	114.3	85	115			
				248		•						
ASD	07/26/08 18:08	11080724-3	67.97008	248	315.47	mg/L	99.3	85	115	0	20	
		SM4500C	:I-F									
Type	Analyzed			Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
, ,,,	,											
100	07/04/00 44 00								•			
						•						
						-						
						-						
						•			110			
AS	07/21/08 16:09	10XCL	30	120	155	mg/L	116.7	90	110			M
DUP	07/21/08 16:09			140	141	mg/L				0.7	20	
olved		M200.7 IC	P									
Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ICV	07/26/08 17:42	11080717-3	2		1.973	mg/L	98.7	95	105			
						•						
		080724-3	.5			-	106.8					
AS	07/26/08 18:04	11080724-3	.5	U	.552	mg/L	110.4	85	115			
	57720700 10.04		.0	U	.559	9/ =		50				
	Ived Type ICV ICB LFB AS ASD ICV ICB LFB AS ASD ICV ICB LFB AS ASD ICV ICB LFB AS ASD ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICV ICB ICF ICV ICB ICV ICB ICV ICB ICV	ICB 07/25/08 21:02 LFB 07/25/08 21:14 AS 07/25/08 22:46 ASD 07/25/08 22:52 Ived Type Analyzed ICV 07/25/08 20:56 ICB 07/25/08 21:02 LFB 07/25/08 21:02 LFB 07/25/08 22:46 ASD 07/25/08 22:52 red Type Analyzed ICV 07/26/08 17:42 ICB 07/26/08 17:46 LFB 07/26/08 17:48 ASD 07/26/08 18:04 ASD 07/26/08 18:04 ASD 07/21/08 11:30 ICV 07/26/08 18:08 Type Analyzed ICB 07/21/08 11:30 ICV 07/21/08 16:09 DUP 07/21/08 16:09 DUP 07/21/08 16:09 DUP 07/21/08 16:09 DIVed Type Analyzed	ICB 07/25/08 21:02 LFB 07/25/08 21:14 MS080714-1 AS 07/25/08 22:46 MS080714-1 IVed M200.8 IC Type Analyzed PCN/SCN ICV 07/25/08 20:56 MS080722-4 ICB 07/25/08 21:02 LFB 07/25/08 21:14 MS080714-1 AS 07/25/08 21:14 MS080714-1 AS 07/25/08 22:46 MS080714-1 AS 07/25/08 22:52 MS080714-1 AS 07/25/08 22:52 MS080714-1 ASD 07/25/08 22:52 MS080714-1 ICV 07/26/08 17:46 II080717-3 ICB 07/26/08 17:46 LFB 07/26/08 18:04 II080724-3 AS 07/26/08 18:04 II080724-3 AS 07/26/08 18:08 II080724-3 ASD 07/21/08 11:30 WI071212-1 LFB 07/21/08 16:00 WI080620-3 LFB 07/21/08 16:00 WI080620-3 LFB 07/21/08 16:09 I0XCL DUP 07/21/08 16:09 DIVED M200.7 IC Type Analyzed PCN/SCN ICV 07/21/08 16:09 I0XCL DUP 07/21/08 16:09 DIVED M200.7 IC Type Analyzed PCN/SCN	ICB	ICB	ICB	CB	ICB	ICB	CB	ICB 07/25/08 21:02	CB

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Project ID: OJ06DZ

ACZ Project ID: L70527

WG248816 WG248816 CV ICV 07/26/08 17:42 II080717-3 2 1.901 mg/L 95.1 95 105 WG248816 CB ICB 07/26/08 17:46 U mg/L 95.1 95 105 WG248816 CB ICB 07/26/08 17:46 U 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 .542 mg/L 108.6 85 115 C Conductivity @25C SM2510B MG248454 VB2510B ACZ ID Type Analyzed PCN/95CN QC Sample Found Units Rec Lower Upper F WG248454CSW1 LCSW 07/21/08 14:27 PCN29501 1408.8 1459 µmhos/cm 103.4	Cobalt, dissolve	d		M200.7 I	CP									
WG248816 CV	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816 CB CB O7/26/08 17-46 WG248816 CB CB O7/26/08 17-58 1080724-3 5 .534 mg/L 106.8 65 115 .170525-01ASD ASD O7/26/08 18-08 1080724-3 5 U .543 mg/L 108.6 85 115 .170525-01ASD ASD O7/26/08 18-08 1080724-3 5 U .543 mg/L 108.6 85 115 .005 .0	WG248816													
WG248816LFB	WG248816ICV	ICV	07/26/08 17:42	11080717-3	2		1.901	mg/L	95.1	95	105			
PORSES-01AS AS O7726/0818-04 1080724-3 .5 U .542 mg/L 108.4 85 115 L70525-01ASD ASD O7726/0818-08 1080724-3 .5 U .543 mg/L 108.6 85 115 L70525-01ASD ASD O7726/0818-08 1080724-3 .5 U .543 mg/L 108.6 85 115 L70525-01ASD ASD O7726/0818-08 PORNSCN CS Ample Found Units Rec Lower Upper Found Units Unit	WG248816 CB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
Conductivity @25C	WG248816LFB	LFB	07/26/08 17:58	11080724-3	.5		534	mg/L	106.8	85	115			
Conductivity @25C SM2510B SM25	L70525-01AS	AS	07/26/08 18:04	11080724-3	.5	U	.542	mg/L	108.4	85	115			
MC248454	L70525-01ASD	ASD	07/26/08 18:08	11080724-3	.5	U	.543	mg/L	108.6	85	115	0.18	20	
WG248454	Conductivity @2	5C		SM2510E	3									
WG248454LCSW1	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248454LCSW4	WG248454													
L70527-04DUP DUP 07/21/08 20:37 1408 3170 3190	WG248454LCSW1	LCSW	07/21/08 14:27	PCN29501	1408.8		1459	umhos/cm	103.6	90	110			
WG248454LCSW7 LCSW 07/21/08 20.44 PCN29501 1408.8 1455 Jmhos/cm 103.3 90 110 L70551-02DUP DUP 07/21/08 22.29 PCN29501 1408.8 1455 Jmhos/cm 103.3 90 110 WG248454LCSW13 LCSW 07/22/08 3:29 PCN29501 1408.8 1453 Jmhos/cm 103.3 90 110 Copper, dissolvet M22/08 3:29 PCN/2501 1408.8 1453 Jmhos/cm 103.3 90 110 Copper, dissolvet M22/08 150 M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 ICP M2007 I	WG248454LCSW4	LCSW	07/21/08 17:33	PCN29501	1408.8		1456	umhos/cm	103.4	90	110			
L70551-Q2DUP DUP 07/21/08 22:29	L70527-04DUP	DUP	07/21/08 20:37			3170	3190	umhos/cm				0.6	20	
WG248454LCSW10 LCSW 07/22/08 0:16 O7/22/08 3:29 PCN29501 1408 8 1458 Jmhos/cm 103.3 10.3 g0 110 mhos/cm 103.1 90 110 g0 110 mhos/cm 103.3 90 110 g0 110 mhos/cm 103.1 90 110 m	WG248454LCSW7	LCSW	07/21/08 20:44	PCN29501	1408.8		1455	umhos/cm	103.3	90	110			
WG248454LCSW13 LCSW 07/22/08 3:29 PCN29501 1408.8 1453 Jmhos/m 103.1 90 110 Copper, disso/em isolated by the dissolated by the production of the producti	L70551-02DUP	DUP	07/21/08 22:29			3910	3890	umhos/cm				0.5	20	
WG248454LCSW13 LCSW 07/22/08 3:29 PCN29501 1408.8 1453 Jmhos/m 103.1 90 110 Copper, dissolvet M200.7 ICP ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec Lower Upper Found Units New 248816 WG248816ICB ICB 07/26/08 17:46 Upper Upper M9 105 109 M9 100 mg/L 95.1 95 105 Upper M9 115 Upper M9 100 M9 101 M9 101 M9 M9 115 Upper M9 M9 115 Upper M9 M9 110														

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Project ID: OJ06DZ

Fluoride			SM4500F	-C									
ACZ ID	Туре	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			
WG248699 CB	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	R
WG248775													
WG248775 CV	ICV	07/25/08 10:36	WC080714-1	2		1.85	mg/L	92.5	90	110			
WG248775 CB	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	R
lron, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816 CV	ICV	07/26/08 17:42	11080717-3	2		1.931	mg/L	96.6	95	105			
WG248816 CB	ICB	07/26/08 17:46				U	mg/L		-0.06	0.06			
WG248816LFB	LFB	07/26/08 17:58	11080724-3	1		1.079	mg/L	107.9	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	1	.05	1.146	mg/L	109.6	85	115			
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	1	.05	1.155	mg/L	110.5	85	115	0.78	20	
Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248596													
WG248596 CV	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, diss	solved		M200.7 I	 CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	11080717-3	100		98.73	ma/l	09.7	95	105			
WG248816ICV WG248816ICB	ICB	07/26/08 17:42	11000/17-3	100		98.73 U	mg/L	98.7					
			11000724.2	40 00000			mg/L	100.9	-0.6 95	0.6 115			
WG248816LFB	LFB AS	07/26/08 17:58 07/26/08 18:04	080724-3 080724-3	49.96908 49.96908	34.3	54.86 89.93	mg/L mg/L	109.8 111.3	85 85	115 115			
L70525-01AS													

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Manganese, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816 CV	ICV	07/26/08 17:42	11080717-3	2		2.0367	mg/L	101.8	95	105			
WG248816 CB	ICB	07/26/08 17:46				U	mg/L		-0.015	0.015			
WG248816LFB	LFB	07/26/08 17:58	11080724-3	.5		.5569	mg/L	111.4	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	.5	U	576	mg/L	115.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	.5	U	.581	mg/L	116.2	85	115	0.86	20	MA
Mercury, dissol	ved		M245.1 C	CVAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248382													
WG248382 CV	ICV	07/18/08 19:20	11080624-3	.00501		.00522	mg/L	104.2	90	110			
WG248382 CB	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	11080711-8	.002		.002	mg/L	100	85	115			
L70469-01LFM	LFM	07/18/08 22:37	11080711-8	.002	U	.00197	mg/L	98.5	85	115			
L70469-01LFMD	LFMD	07/18/08 22:39	11080711-8	.002	U	.00191	mg/L	95.5	85	115	3.09	20	
L70527-04LFM	LFM	07/18/08 23:09	11080711-8	.002	U	.00198	mg/L	99	85	115			
L70527-04LFMD	LFMD	07/18/08 23:11	11080711-8	.002	U	.00201	mg/L	100.5	85	115	1.5	20	
Molybdenum, d	issolved		M200.7 I	CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816 CV	ICV	07/26/08 17:42	11080717-3	2		1.947	mg/L	97.4	95	105			
WG248816 CB	ICB	07/26/08 17:46				U	mg/L		-0.03	0.03			
WG248816LFB	LFB	07/26/08 17:58	11080724-3	.5		534	mg/L	106.8	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	.5	U	.556	mg/L	111.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	.5	U	.558	mg/L	111.6	85	115	0.36	20	
Nickel, dissolve	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816 CV	ICV	07/26/08 17:42	11080717-3	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	11080724-3	.5		.566	mg/L	113.2	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	.5	.05	.616	mg/L	113.2	85	115			
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	.5	.05	614	mg/L	112.8	85	115	0.33	20	
Nitrate/Nitrite as	s N		M353.2 -	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248688													
WG248688 CV	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	77100001011	2.710		U.404	mg/L	55.5	-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

Project ID:

OJ06DZ

ACZ Project ID: L70527

pH (lab)			M150.1 -	Electromet	ric								
ACZ ID	Туре	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	DCN20627	0	9.4	9.36	units	107.7	00	110	0.4	20	
WG248454LCSW12 WG248454LCSW15		07/22/08 0:30 07/22/08 3:43	PCN29627 PCN29627	6 6		6.46 6.45	units units	107.7 107.5	90 90	110 110			
Potassium, disso	lved		M200.7 (
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248977													
WG248977ICV	ICV	07/30/08 11:48	11080717-3	20		20.24	mg/L	101.2	95	105			
WG248977ICB	ICB	07/30/08 11:51	11000717-5	20		20.24 U	mg/L	101.2	-0.9	0.9			
WG248977LFB	LFB	07/30/08 12:04	11080724-3	99.76186		100.46	mg/L	100.7	85	115			
L70525-01AS	AS	07/30/08 12:11	11080724-3	99.76186	4.4	111.48	mg/L	107.3	85	115			
L70525-01ASD	ASD	07/30/08 12:14	11080724-3	99.76186	4.4	111.84	mg/L	107.7	85	115	0.32	20	
Residue, Filterabl	le (TDS) @180C	SM25400										
ACZ ID	Туре	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	. 0.100.00	200	2880	2896	mg/L	.00.0	00	.20	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, dissolv	/ed		M200.8 I	CP-MS									
ACZ ID	Туре	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, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816ICV	ICV	07/26/08 17:42	11080717-3	100		98.61	mg/L	98.6	95	105			
WG248816 CB	ICB	07/26/08 17:46				U	mg/L		-0.9	0.9			
							_						
WG248816LFB	LFB	07/26/08 17:58	11080724-3	98.21624		107.62	mg/L	109.6	85	115			
WG248816LFB L70525-01AS	LFB AS	07/26/08 17:58 07/26/08 18:04	080724-3 080724-3	98.21624 98.21624	38.6	107.62 147.74	mg/L mg/L	109.6 111.1	85 85	115 115			

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sulfate			SM4500 S	O4-D									
ACZ ID	Туре	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, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	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			
WG248596 CB	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, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	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			
WG248596 CB	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 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248816													
WG248816 CV	ICV	07/26/08 17:42	11080717-3	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	11080724-3	.5		.561	mg/L	112.2	85	115			
L70525-01AS	AS	07/26/08 18:04	11080724-3	.5	.09	.676	mg/L	117.2	85	115			N
L70525-01ASD	ASD	07/26/08 18:08	11080724-3	.5	.09	.68	mg/L	118	85	115	0.59	20	N

FMI Gold & Copper - Sierrita

ACZ Project ID: L70527

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70527-01	WG248816	Manganese, dissolved	M200.7 CP	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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 CP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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 CP	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 CP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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).

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: L70527

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
AGZ ID	WORKINGIN	TAKAMETEK	WETTIOD	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	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).
	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 CP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG248493	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Date Printed: 7/17/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
		Х
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70527-01	IW-15		Υ		Υ							
L70527-02	IW-16		Υ		Υ							
L70527-03	IW-17		Υ		Υ							
L70527-04	IW-18		Υ		Υ							
L70527-05	IW-19		Υ		Υ							
L70527-06	IW-20		Υ		Υ							

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:		

L70527

	DORATORIES, INC. nboat Springs, CO 80487 (80				•		AIN of	CUST	ODY	
Report to:	ibbat springs, co obtor (ot	30) 304	3+35		1160	70				
Name: Bill Dorr	15		Addre	ess: 💪	200 W	. Dur	1 Mine	e Rd		
Company: Freeport	McMoRan Siegrita						85614			
E-mail: billy-dorris	sefmi.com]			•	648-88				
Copy of Report to:										
Name: Dan Simps	501		E-ma	ii: da	n5@ r	iginc.	Com			
Company: Hydro Ge			Telephone: 520-293-1500 Ext. 133							
Invoice to:										
Name:			Addre	ess:						
Company:										
E-mail:			Telep	hone:						
	nolding time (HT), or if insuffic							s		
	shall ACZ proceed with request ct client for further instruction						N	o	J [
	ed with the requested analyses					will be au	alified.			
PROJECT INFORMATION	od Wild Gio Todaoocod analysis	,					list or use	quote nur	nber)	
Quote #:	/		42	a				:		
Project/PO#: OJØ	6 D 2		Containers	- 73						
Reporting state for comp			ntai	F.						
Sampler's Name:			ု ဒို	AMBIENT						
Are any samples NRC lice	ensable material?		# of	180				:		
SAMPLE IDENTIFICATION	ON DATE:TIME	Matrix		di					<u> </u>	
IW-15	7-15-08 / 13:55	GW	5	X_					<u> </u>	
IW-16	7-15-08 / 13:40	GW	5	X						
IW-17	7-15-08 / 13:30	6W	5	X						
IW-18	7-15-08 / 13:15	GW	5	X			 			
IW-19	7-15-08/ 12:33	GW_		X						
IW-20	7-15-08/12:25	GW	5	X				-		
		 								
				 			 			
Matrix SW (Surface Water	r) · GW (Ground Water) · WW (W	aste Wat	er) · D	L W (Drink	ing Water)	- SL (Sludge	e) SO (Soil) · OL (Oil)	· Other	
REMARKS/ SAMPLE DISC			,	•						
Copy of Report &	to Dan Simpson con	tains	only	"50,	," 1850	HS wit	4 QC	Su mmar	·y.	
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									FAGL	
nena	ww #12017-1	11 72	7 ///	n E	17/0				of	
• • • •	/ <i>ING #12 867 7E</i> efer to ACZ's terms & conc					e side of	this COC		\Box	
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13:0022	7-16-08/			1.	1)		ユ	1208	1014	
vousing 1. Com	7 70 00/ /	J. JU		<i>⊮</i> √				, , - 	<u> </u>	
		-								



Analytical Report

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

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.

S. Havermehl





FMI Gold & Copper - Sierrita

ACZ Sample ID: L70581-01 Project ID: OJ06DZ Date Sampled: 07/16/08 14:05

Sample ID: IW-14 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

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		ma/L	10	50	07/22/08 12:53	tbd

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		ma/L	10	50	07/22/08 12:58	tbd

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

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		ma/L	10	50	07/22/08 13:09	tbd

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		ma/L	10	50	07/22/08 13:14	tbd

IW-12

Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ ACZ Sample ID: L70581-07 Date Sampled: 07/17/08 10:40

Date Received: 07/18/08

Sample Matrix: Ground Water

Wet Chemistry

Sample ID:

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

FMI Gold & Copper - Sierrita

ACZ Sample ID: L70581-08 Project ID: OJ06DZ Date Sampled: 07/17/08 10:30

Sample ID: IW-13 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		ma/L	10	50	07/22/08 13:24	tbd

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Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

Samp	

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

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FMI Gold & Copper - Sierrita

Alkalinity as CaC	O3		SM2320B	- Titration	1								
ACZ ID	Туре	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, disso	lved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248844													
WG248844 CV	ICV	07/26/08 10:45	11080717-3	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	11080724-3	1		1.092	mg/L	109.2	85	115			
L70446-02AS	AS	07/26/08 11:12	11080724-3	1	U	1.083	mg/L	108.3	85	115			
L70446-02ASD	ASD	07/26/08 11:15	11080724-3	1	U	1.106	mg/L	110.6	85	115	2.1	20	
L70572-04AS	AS	07/26/08 11:35	11080724-3	1	U	1.085	mg/L	108.5	85	115			
L70572-04ASD	ASD	07/26/08 11:38	11080724-3	1	U	1.118	mg/L	111.8	85	115	3	20	
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248677													
WG248677 CV	ICV	07/26/08 6:37	MS080722-4	.02006		02074	mg/L	103.4	90	110			
WG248677 CB	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													
WG248923 CV	ICV	07/30/08 5:42	MS080722-4	.02006		.02051	mg/L	102.2	90	110			
WG248923 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248923													
WG248923 CV	ICV	07/30/08 5:42	MS080722-4	.05		.04994	mg/L	99.9	90	110			
WG248923 CB	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			
							Э.						
L70541-01AS	AS	07/30/08 6:10	MS080714-1	.05	.0061	.05479	mg/L	97.4	70	130			

FMI Gold & Copper - Sierrita

Barium, dissol	ved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	2		2.0726	mg/L	103.6	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.009	0.009			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	.5		.5031	mg/L	100.6	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	.087	6124	mg/L	105.1	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	.087	6215	mg/L	106.9	85	115	1.47	20	
Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248677													
WG248677 CV	ICV	07/26/08 6:37	MS080722-4	.05		.05132	mg/L	102.6	90	110			
WG248677 CB	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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	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	55.5	-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, disso	lved		M200.7 I	 CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	11080717-3	100		98.14	mg/L	98.1	95	105			
WG248828 CB	ICB	07/26/08 1:38		.00		U	mg/L	55.1	-0.6	0.6			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	67.97008		70.88	mg/L	104.3	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	67.97008	93.6	163.98	mg/L	103.5	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	67.97008	93.6	163.22	mg/L	102.4	85	115	0.46	20	

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FMI Gold & Copper - Sierrita

L70579-05AS

L70579-05ASD

AS

07/26/08 2:51

ASD 07/26/08 2:54

11080724-3

11080724-3

Project ID:	0	J06DZ							,				
Chloride			SM4500C	I-E									
ACZ ID	Туре	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, disso	lved		M200.7 IC	P									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	11080717-3	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	11080724-3	.5		.499	mg/L	99.8	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	U	.515	mg/L	103	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	U	.528	mg/L	105.6	85	115	2.49	20	
Cobalt, dissolved	ı		M200.7 IC	P									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	11080717-3	2		1.934	mg/L	96.7	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	.5		.499	mg/L	99.8	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	U	.509	mg/L	101.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	U	52	mg/L	104	85	115	2.14	20	
Conductivity @2	5C		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	umhos/cm	103.6	90	110			
WG248454LCSW4	LCSW	07/21/08 17:33	PCN29501	1408.8		1456	umhos/cm	103.4	90	110			
WG248454LCSW7	LCSW	07/21/08 20:44	PCN29501	1408.8		1455	umhos/cm	103.3	90	110			
WG248454LCSW10	LCSW	07/22/08 0:16	PCN29501	1408.8		1455	umhos/cm	103.3	90	110			
L70581-08DUP	DUP	07/22/08 3:27			3410	3390	umhos/cm				0.6	20	
WG248454LCSW13	LCSW	07/22/08 3:29	PCN29501	1408.8		1453	umhos/cm	103.1	90	110			
Copper, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	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	11080724-3	.5		.503	mg/L	100.6	85	115			

.53

.541

U

mg/L

mg/L

106

108.2

85

85

115

115 2.05 20

.5

.5

FMI Gold & Copper - Sierrita ACZ Project ID: L70581

ACZ ID	Туре	Analyzed											
1110010-00		Allalyzou	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			
WG248768 CB	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
L70581-08LFM	LFM	07/24/08 22:19	WI080711-2	.2	047	.2458	mg/L	99.4	90	110			
Fluoride			SM4500F	-C									
ACZ ID	Туре	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 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828ICV	ICV	07/26/08 1:34	11080717-3	2		1.987	mg/L	99.4	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.06	0.06			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	1		1.028	mg/L	102.8	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	1	U	1.083	mg/L	108.3	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	1	U	1.099	mg/L	109.9	85	115	1.47	20	
Lead, dissolved			M200.8 IC	CP-MS									
ACZ ID	Туре	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			
WG248923 CB	ICB	07/30/08 5:48		.00		.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, diss	solved		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828		, i											
WG248828ICV	ICV	07/26/08 1:34	11080717-3	100		99.74	mg/L	99.7	95	105			
WG248828ICB	ICB	07/26/08 1:38	11000717-0	100		99.74 U	mg/L	55.1	-0.6	0.6			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	49.96908		52.2	mg/L	104.5	-0.0 85	115			
L70579-05AS	AS	07/26/08 1:52	11080724-3	49.96908	19.7	76.52	mg/L	113.7	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	49.96908	19.7	75.61	mg/L	111.9	85	115	1.2	20	
	7.00	01/20/00 2.04	11000724-0	+0.00000	13.7	7 0.0 1	g/∟	111.0		110	1.2	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Manganese, dis	solved		M200.7 I	CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	2		1.9842	mg/L	99.2	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.015	0.015			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	.5		5304	mg/L	106.1	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	U	554	mg/L	110.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	U	5648	mg/L	113	85	115	1.93	20	
Mercury, dissol	ved		M245.1 (CVAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248382													
WG248382ICV	ICV	07/18/08 19:20	11080624-3	.00501		.00522	mg/L	104.2	90	110			
WG248382 CB	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	11080711-8	.002		.002	mg/L	100	85	115			
L70527-04LFM	LFM	07/18/08 23:09	11080711-8	.002	U	.00198	mg/L	99	85	115			
L70527-04LFMD	LFMD	07/18/08 23:11	11080711-8	.002	U	.00201	mg/L	100.5	85	115	1.5	20	
WG248657													
WG248657 CV	ICV	07/23/08 20:19	11080624-3	.00501		.00517	mg/L	103.2	95	105			
WG248657 CB	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	11080711-8	.002		.00204	mg/L	102	85	115			
L70581-02LFM	LFM	07/23/08 22:09	11080711-8	.002	U	.00212	mg/L	106	85	115			
L70581-02LFMD	LFMD	07/23/08 22:11	11080711-8	.002	U	.00202	mg/L	101	85	115	4.83	20	
Molybdenum, d	issolved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	2		2.018	mg/L	100.9	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	.5		.519	mg/L	103.8	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	U	532	mg/L	106.4	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	U	.531	mg/L	106.2	85	115	0.19	20	
Nickel, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	2		1.914	mg/L	95.7	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	.5		494	mg/L	98.8	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	U	504	mg/L	100.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	U	.516	mg/L	103.2	85	115	2.35	20	

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

ACZ Project ID: L70581

Nitrate/Nitrite as	N		M353.2 -	H2SO4 pre	eserved								
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248688													
WG248688 CV	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			M
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	R/
pH (lab)			M150.1 -	Electromet	ric								
ACZ ID	Туре	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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	20		20.37	mg/L	101.9	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.9	0.9			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	99.76186		105.55	mg/L	105.8	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	99.76186	1.6	119.75	mg/L	118.4	85	115			M
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	99.76186	1.6	117.11	mg/L	115.8	85	115	2.23	20	M
Residue, Filterab	le (TDS) @180C	SM25400										
ACZ ID	Туре	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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249072													
WG249072 CV	ICV	07/30/08 19:45	MS080722-4	.05		.05139	mg/L	102.8	90	110			
WG249072 CB	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			
. =====	AS	07/30/08 20:14	MS080714-1	.1	.0012	10804	mg/L	106.8	70	130			
L70581-01AS	710												

(800) 334-5493

FMI Gold & Copper - Sierrita

Sodium, dissolv	ed		M200.7 (CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	100		101.59	mg/L	101.6	95	105			
WG248828 CV	ICV	07/26/08 1:34	11080717-3	100		99.7	mg/L	99.7	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.9	0.9			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-6	6			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	98.21624		102.7	mg/L	104.6	85	115			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	98.21624		103.8	mg/L	105.7	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	98.21624	16.3	130.9	mg/L	116.7	85	115			M
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	98.21624	16.3	129.15	mg/L	114.9	85	115	1.35	20	
Sulfate			SM4500	SO4-D									
ACZ ID	Туре	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			
_70581-08DUP	DUP	07/22/08 13:29			1850	1855	mg/L				0.3	20	
Thallium, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	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			L
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			
WG248923 CB	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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG248923 CB	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			

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ ACZ Project ID: L70581

Zinc, dissolved			M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG248828													
WG248828 CV	ICV	07/26/08 1:34	11080717-3	2		1.962	mg/L	98.1	95	105			
WG248828 CB	ICB	07/26/08 1:38				U	mg/L		-0.03	0.03			
WG248828LFB	LFB	07/26/08 1:52	11080724-3	.5		.522	mg/L	104.4	85	115			
L70579-05AS	AS	07/26/08 2:51	11080724-3	.5	U	.569	mg/L	113.8	85	115			
L70579-05ASD	ASD	07/26/08 2:54	11080724-3	.5	U	.57	mg/L	114	85	115	0.18	20	

Page 18 of 24 REPIN.01.06.05.01

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 CP	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 CP-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 CP	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).

Inorganic Extended Qualifier Report

ACZ Project ID: L70581

FMI Gold & Copper - Sierrita

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 CP	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	* * *
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	, , , , , , , , , , , , , , , , , , , ,
	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 CP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
		Sodium, dissolved	M200.7 ICP	MA	• • • • • • • • • • • • • • • • • • • •
	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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Date Printed: 7/18/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
		Х
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70581-01	IW-14		Υ		Υ							
L70581-02	MH-13A		Υ		Υ							
L70581-03	MH-13B		Υ		Υ							1
L70581-04	MH-13C		Υ		Υ							1
L70581-05	DUP071608A		Υ		Υ							1
L70581-06	IW-6A		Υ		Υ							1
L70581-07	IW-12		Υ		Υ]
L70581-08	IW-13		Υ		Υ							

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

	oratories, Inc.	L	.70	58	31	Cl-	AIN o	f CUST	ODY		
2773 Downhill Drive Steam	boat Springs, CO 80487 (8	100) 334	4-5 49 3								
Report to:				_ .							
Name: Bill Dorris	1 10 0 0 1	_	Addr	ess: 🔏	5200 C	U. DVI	101 M	ine Rd			
Company: Freeport Mile E-mail: billy - dorrise	Mokan Siernta	4					854	214			
	Dfmi, com		Telephone: 520-648-8873								
Copy of Report to:											
Name: Dan 5 mps	ion		E-ma	il: 🚜	ans@	hgine.	Com				
Company: Hydro Ge	o Chem		Telep	hone:	520-3	2 <i>93-15</i>	00 Ex	T. 133			
Invoice to:											
Name:			Addre	ess:	_						
Company:		7									
E-mail:		7	Telep	hone:							
If sample(s) received past ho	olding time (HT), or if insuffic	 cient HT			mplete			YES			
analysis before expiration, sh								NO]		
If "NO" then ACZ will contact is indicated, ACZ will proceed						a will be a	unalifical				
PROJECT INFORMATION	Twitti tile requested alialyse	s, even						e quote nui	mber)		
Quote #:											
Project/PO #: OJØ6	. D .2	1	ers	100							
Reporting state for compl	<u>.</u>	1	tai	1							
Sampler's Name:	rance testing.	1	of Containers	17							
Are any samples NRC licer	sable material?	-	of (318							
SAMPLE IDENTIFICATION		Matrix	#	AMBIENT-TB							
IW-14	7-16-08 / 14:05	GW	5	×		<u> </u>	1 -				
MH-13A	7-16-08/ 8:06	GW	5	×					†		
MH-13B	7-16-08/ 13:24	GW	5	X							
MH-13C	7-16-08/ 12:20	6W		×							
DUP071608A	7-16-08	GW	5	X							
IW-6A	7-17-08/10:50	GW		×							
IW-12	7-17-08/10:40	GW		×							
IW-13	7-17-08/ 10:30	GW		×							
	-		ı								
Matrix SW (Surface Water)	- GW (Ground Water) - WW (W	aste Wat	er) · DV	V (Drinki	ing Water)	- SL (Sludg	je) · SO (So	oil) - OL (Oil)	Other		
REMARKS/ SAMPLE DISCLO	OSURES										
Copy of Report to	Dan Simpson Co	ontain	5 UN	14 "	504" 1	250H5	w.th	QC 500	nnary		
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10 My T. Vous	7-17-08/1	15:00		4.0	<u>'U</u>	 		7-18-06 /	0:00		
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Analytical Report

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

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.

S. Havermehl





FMI Gold & Copper - Sierrita

ACZ Sample ID: L70726-01 Project ID: OJ06DZ Date Sampled: 07/23/08 12:25

Sample ID: IW-4 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		ma/L	10	50	07/31/08 11:49	tbd

FMI Gold & Copper - Sierrita

ACZ Sample ID: **L70726-02** Project ID: OJ06DZ Date Sampled: 07/23/08 12:48

Sample ID: IW-5 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

FMI Gold & Copper - Sierrita

ACZ Sample ID: **L70726-03** Project ID: OJ06DZ Date Sampled: 07/23/08 12:05

Sample ID: IW-8 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		ma/L	10	50	07/31/08 11:57	tbd



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		ma/L	10	50	07/31/08 12:01	tbd

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 SQ4-D	1760		ma/L	10	50	07/31/08 12:05	tbd



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		ma/L	10	50	07/30/08 10:14	aki

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		ma/L	10	50	07/30/08 10:16	aki

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

Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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: OJ06DZ

ACZ Project ID: L70726

Alkalinity as CaC	O3		SM2320B	- Titration									
ACZ ID	Туре	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, disso	lved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.952	mg/L	97.6	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.09	0.09			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	1		.967	mg/L	96.7	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	1	U	1.024	mg/L	102.4	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	1	U	.992	mg/L	99.2	85	115	3.17	20	
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	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	11080730-2	1		.986	mg/L	98.6	85	115			
L70727-01AS	AS	08/05/08 2:42	11080730-2	1	U	1.007	mg/L	100.7	85	115			
L70727-01ASD	ASD	08/05/08 2:45	11080730-2	1	U	.986	mg/L	98.6	85	115	2.11	20	
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.02006		.02059	mg/L	102.6	90	110			
WG249015 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.05154	mg/L	103.1	90	110			
** 324301310V	ICB	07/30/08 12:56	WIO000122-4	.03		.00063	mg/L	103.1	-0.0015	0.0015			
WG249015ICB	CD	01100100 12.00		_			_	00.4					
WG249015ICB	LER	07/30/08 13:09	MS08071/11	05		0/072	ma/l	uu /i		776			
WG249015ICB WG249015LFB L70721-01AS	LFB AS	07/30/08 13:08 07/30/08 13:20	MS080714-1 MS080714-1	.05 .05	.0047	.04972	mg/L mg/L	99.4 97.6	85 70	115 130			

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FMI Gold & Copper - Sierrita

Project ib.		J00DZ											
Barium, dissol	ved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		2.0388	mg/L	101.9	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.009	0.009			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	.5		4873	mg/L	97.5	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	.5	.112	.6012	mg/L	97.8	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	.5	.112	5843	mg/L	94.5	85	115	2.85	20	
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	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	11080730-2	.5		4938	mg/L	98.8	85	115			
L70727-01AS	AS	08/05/08 2:42	11080730-2	.5	.058	5415	mg/L	96.7	85	115			
L70727-01ASD	ASD	08/05/08 2:45	11080730-2	.5	.058	5336	mg/L	95.1	85	115	1.47	20	
Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.04874	mg/L	97.5	90	110			
WG249015 CB	ICB	07/30/08 12:56		,00		U	mg/L	0,10	-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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.04996	ma/l	99.9	90	110			
WG249015ICV WG249015ICB	ICB	07/30/08 12:56	WISU60122-4	.05		.04996 U	mg/L	99.9	-0.0003	0.0003			
WG249015ICB WG249015LFB	LFB	07/30/08 12:36	MS080714-1	.05		.04848	mg/L mg/L	97	-0.0003 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 70	130	1.18	20	
Calcium, disso			M200.7 I										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365	7.	,			•								
	101/	00/04/00 22:52	U000747.2	100		04.50		04.5	0.5	105			
WG249365 CV	ICV	08/04/08 23:52	11080717-3	100		94.52	mg/L	94.5	95	105			
WG249365ICB WG249365LFB	ICB LFB	08/04/08 23:55 08/05/08 0:08	11000720.2	67.07000		U 65.26	mg/L mg/L	O.G	-0.6 85	0.6 115			
L70732-01AS	AS	08/05/08 0:08	080730-2 080730-2	67.97008 67.97008	85.3	149.02	mg/L	96 93.7	85 85	115			
L70732-01AS L70732-01ASD	ASD	08/05/08 1:24	11080730-2	67.97008	85.3	144.79	mg/L	93.7 87.5	85	115	2.88	20	
WG249406		30,0 -, 30 1		557.000	55.0		9, =	2,	3-		00		
	1014	09/05/09 24:20	11000747.0	100		05.07	ma!!	05.7	O.F.	105			
WG249406ICV	ICV	08/05/08 21:38	11080717-3	100		95.67	mg/L	95.7	95 0.6	105 0.6			
WG249406 CB WG249406LFB	ICB LFB	08/05/08 21:42	11080720 2	67.0700.0		U 68.02	mg/L	100 1	-0.6 85				
L70727-02AS	AS	08/05/08 21:56 08/05/08 23:14	080730-2 080730-2	67.97008 67.97008	117	180.86	mg/L mg/L	100.1 94	85	115 115			
L70727-02AS L70727-02ASD	ASD	08/05/08 23:14	11080730-2	67.97008	117	177.23	_	94 88.6	85 85	115	2.03	20	
LIUIZI-UZASD	AOD	00/00/08 23:18	11000730-2	01.91008	117	111.23	mg/L	00.0	00	115	2.03	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Chloride			SM4500C	I-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													
WG249460 CV	ICV	08/05/08 17:33	WI071212-1	54.945		56	mg/L	101.9	90	110			
WG249460 CB	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, diss	solved		M200.7 I	DP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.91	mg/L	95.5	95	105			
WG249365ICB	ICB	08/04/08 23:55	11060717-3	2		U	mg/L	95.5	-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	.5		.483	-	96.6	-0.03 85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	.5	U	497	mg/L	99.4	85	115			
L70732-01AS L70732-01ASD	ASD	08/05/08 1:24	11080730-2	.5 .5	U	481	mg/L mg/L	96.2	85	115	3.27	20	
	ДОВ	00/03/00 1.24	11000730-2	.5	O	.401	mg/L	30.2	00	110	0.27	20	
WG249406													
WG249406 CV	ICV	08/05/08 21:38	11080717-3	2		1.903	mg/L	95.2	95	105			
WG249406 CB	ICB	08/05/08 21:42				U	mg/L		-0.03	0.03			
WG249406LFB	LFB	08/05/08 21:56	11080730-2	.5		.501	mg/L	100.2	85	115			
L70727-02AS	AS	08/05/08 23:14	11080730-2	.5	U	499	mg/L	99.8	85	115			
L70727-02ASD	ASD	08/05/08 23:18	11080730-2	.5	U	.491	mg/L	98.2	85	115	1.62	20	
Cobalt, dissolve	ed		M200.7 I	CP CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.903	mg/L	95.2	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	.5		.484	mg/L	96.8	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	.5	U	.488	mg/L	97.6	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	.5	U	.483	mg/L	96.6	85	115	1.03	20	
WG249406													
WG249406 CV	ICV	08/05/08 21:38	11080717-3	2		1.909	mg/L	95.5	95	105			
WG249406 CB	ICB	08/05/08 21:42				U	mg/L		-0.03	0.03			
WG249406LFB	LFB	08/05/08 21:56	11080730-2	.5		504	mg/L	100.8	85	115			
L70727-02AS	AS	08/05/08 23:14	11080730-2	.5	U	505	mg/L	101	85	115			
				-	-			-		-			

(800) 334-5493

FMI Gold & Copper - Sierrita

Conductivity @2	5C		SM2510B										
ACZ ID	Туре	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	umhos/cm	101.2	90	110			
WG248934LCSW4	LCSW	07/28/08 20:27	PCN29501	1408.8		1426	umhos/cm	101.2	90	110			
L70727-02DUP	DUP	07/28/08 22:14			1260	1257	umhos/cm				0.2	20	
WG248934LCSW7	LCSW	07/28/08 23:56	PCN29501	1408.8		1414	umhos/cm	100.4	90	110			
WG248934LCSW10	LCSW	07/29/08 3:04	PCN29501	1408.8		1411	umhos/cm	100.2	90	110			
WG248934LCSW13	LCSW	07/29/08 6:02	PCN29501	1408.8		1402	umhos/cm	99.5	90	110			
Copper, dissolve	d		M200.7 IC	;P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.936	mg/L	96.8	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	.5		.483	mg/L	96.6	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	.5	U	.492	mg/L	98.4	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	.5	U	.482	mg/L	96.4	85	115	2.05	20	
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.899	mg/L	95	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.488	mg/L	97.6	85	115			
L70727-01AS	AS	08/05/08 2:42	11080730-2	.5	U	.486	mg/L	97.2	85	115			
L70727-01ASD	ASD	08/05/08 2:45	11080730-2	.5	U	.477	mg/L	95.4	85	115	1.87	20	
Cyanide, total			M335.4 - 0	Colorimet	ric w/ distil	ation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249549													
WG249549 CV	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	00	-0.009	0.009			
WG249552							9						
WG249552ICV	101/	09/06/09 19:27	WI090736 F	2		2725	a./I	04.2	00	110			
	ICV	08/06/08 18:27	WI080726-5	.3		.2735	mg/L	91.2	90	110			
WG249552ICB WG249496LRB	ICB LRB	08/06/08 18:28				U	mg/L		-0.015	0.015			
		08/06/08 18:29	WI00070C 0	2			mg/L	00.0	-0.015	0.015			
WG249496LFB	LFB	08/06/08 18:30	WI080726-2	.2		1992	mg/L	99.6	90	110	0	20	
L70724-03DUP L70901-07LFM	DUP LFM	08/06/08 18:31 08/06/08 18:45	WI080726-2	.2	U	U .2025	mg/L	101.2	00	110	0	20	
	LFIVI	06/06/06 16.45	VV 10007 20-2	.2	U	.2025	mg/L	101.3	90	110			
WG249730	10)	00/00/02 2 / 2 -	1411000722.5	•		06:-		00.0	6.5	4			
WG249730ICV	ICV	08/09/08 21:03	WI080726-5	.3		.2817	mg/L	93.9	90	110			
WG249730 CB	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			
WG249730 CV1	ICV	08/11/08 15:10	WI080726-5	.3		.2783	mg/L	92.8	90	110			
WG249730 CB1	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	

(800) 334-5493

FMI Gold & Copper - Sierrita

Fluoride			SM4500F	-C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249168													
WG249168 CV	ICV	07/31/08 12:46	WC080725-1	2		2.01	mg/L	100.5	90	110			
WG249168 CB	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 IC										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.892	mg/L	94.6	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.06	0.06			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	1		974	mg/L	97.4	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	1	.11	1.109	mg/L	99.9	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	1	.11	1.079	mg/L	96.9	85	115	2.74	20	
WG249406													
WG249406 CV	ICV	08/05/08 21:38	11080717-3	2		1.906	mg/L	95.3	95	105			
WG249406 CB	ICB	08/05/08 21:42				U	mg/L		-0.06	0.06			
WG249406LFB	LFB	08/05/08 21:56	11080730-2	1		1.029	mg/L	102.9	85	115			
L70727-02AS	AS	08/05/08 23:14	11080730-2	1	U	1.04	mg/L	104	85	115			
L70727-02ASD	ASD	08/05/08 23:18	11080730-2	1	U	1.019	mg/L	101.9	85	115	2.04	20	
Lead, dissolved			M200.8 IC										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.04992	mg/L	99.8	90	110			
WG249015 CB	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, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	100		95.96	mg/L	96	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.6	0.6			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	49.96908		48.03	mg/L	96.1	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	49.96908	61	108.76	mg/L	95.6	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	49.96908	61	106.03	mg/L	90.1	85	115	2.54	20	
WG249406													
WG249406 CV	ICV	08/05/08 21:38	11080717-3	100		95.53	mg/L	95.5	95	105			
WG249406 CB	ICB	08/05/08 21:42				U	mg/L		-0.6	0.6			
WG249406LFB	LFB	08/05/08 21:56	11080730-2	49.96908		49.72	mg/L	99.5	85	115			
L70727-02AS	AS	08/05/08 23:14	11080730-2	49.96908	59.2	108.01	mg/L	97.7	85	115			
L70727-02ASD	ASD	08/05/08 23:18	11080730-2	49.96908	59.2	105.14	mg/L	91.9	85	115	2.69	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Manganese, dis	solved		M200.7 I	CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.9992	mg/L	100	95	105			
WG249365 CB	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	11080730-2	.5	.018	.5213	mg/L	100.7	85	115	2.63	20	
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.9574	mg/L	97.9	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.015	0.015			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.5148	mg/L	103	85	115			
L70727-01AS	AS	08/05/08 2:42	11080730-2	.5	.006	.5151	mg/L	101.8	85	115			
_70727-01ASD	ASD	08/05/08 2:45	11080730-2	.5	.006	.505	mg/L	99.8	85	115	1.98	20	
Mercury, dissol	ved		M245.1 (CVAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249012													
WG249012 CV	ICV	07/30/08 16:54	11080723-2	.00501		.00522	mg/L	104.2	95	105			
WG249012ICB	ICB	07/30/08 16:56	110007232	.00001		.00022	mg/L	104.2	-0.0002	0.0002			
WG249029	108	07700700 10.00				J	mg/L		0.0002	0.0002			
	LDD	07/00/00 40 00					,,		0.00044	0.00044			
NG249029LRB	LRB	07/30/08 18:30	W000744 0	000		U	mg/L	400.5	-0.00044	0.00044			
WG249029LFB	LFB	07/30/08 18:33	11080711-8	.002	1.1	.00201	mg/L	100.5	85	115			
L70721-01LFM	LFM	07/30/08 18:38	11080711-8	.002	U	.00206	mg/L	103	85	115	0.40	0.0	
_70721-01LFMD	LFMD	07/30/08 18:40	080711-8	.002	U	.00199	mg/L	99.5	85	115	3.46	20	
_70726-03LFM _70726-03LFMD	LFM LFMD	07/30/08 19:10 07/30/08 19:12	080711-8 080711-8	.002	U U	.00215	mg/L	107.5 106.5	85 85	115 115	0.93	20	
						.00213	mg/L	100.5	00	115	0.93		
Molybdenum, d			M200.7 I										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
NG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.947	mg/L	97.4	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	.5		.478	mg/L	95.6	85	115			
_70732-01AS	AS	08/05/08 1:21	11080730-2	.5	U	.481	mg/L	96.2	85	115			
.70732-01ASD	ASD	08/05/08 1:24	11080730-2	.5	U	.465	mg/L	93	85	115	3.38	20	
NG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.893	mg/L	94.7	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.477	mg/L	95.4	85	115			
_70727-01AS	AS	08/05/08 2:42	11080730-2	.5	.01	.487	mg/L	95.4	85	115			
_70727-01ASD	ASD	08/05/08 2:45	11080730-2	.5	.01	.485	mg/L	95	85	115	0.41	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Nickel, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249404													
WG249404 CV	ICV	08/05/08 17:05	11080508-3	2.004		2.009	mg/L	100.2	95	105			
WG249404 CB	ICB	08/05/08 17:08				U	mg/L		-0.03	0.03			
WG249404LFB	LFB	08/05/08 17:21	11080730-2	4985		.494	mg/L	99.1	85	115			
L70723-01AS	AS	08/05/08 18:14	11080730-2	.4985	U	.506	mg/L	101.5	85	115			
L70723-01ASD	ASD	08/05/08 18:17	11080730-2	.4985	U	.499	mg/L	100.1	85	115	1.39	20	
WG249489													
WG249489 CV	ICV	08/06/08 12:19	11080508-3	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	11080730-2	.4985		.475	mg/L	95.3	85	115			
L70721-01AS	AS	08/06/08 12:42	11080730-2	.4985	U	.484	mg/L	97.1	85	115			
L70721-01ASD	ASD	08/06/08 12:45	11080730-2	.4985	U	.481	mg/L	96.5	85	115	0.62	20	
Nitrate/Nitrite as	N		M353.2 -	H2SO4 pre	eserved								
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 -	Electromet	tric								
ACZ ID	Туре	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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365ICV	ICV	08/04/08 23:52	11080717-3	20		20.24	mg/L	101.2	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.9	0.9			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	99.76186		99.95	mg/L	100.2	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	99.76186	.8	107.7	mg/L	107.2	85	115			
	ASD	08/05/08 1:24	11080730-2	99.76186	.8	104.59	mg/L	104	85	115	2.93	20	
L70732-01ASD													
L70732-01ASD	ICV	08/05/08 2:09	11080717-3	20		19.51	mg/L	97.6	95	105			
L70732-01ASD WG249368	ICV ICB	08/05/08 2:09 08/05/08 2:12	080717-3	20		19.51 U	mg/L mg/L	97.6	95 -0.9	105 0.9			
L70732-01ASD WG249368 WG249368ICV			080717-3 080730-2	20 99.76186			_	97.6 100.7					
L70732-01ASD WG249368 WG249368 CV WG249368 CB	ICB	08/05/08 2:12			3.2	U	mg/L		-0.9	0.9			

FMI Gold & Copper - Sierrita

Residue, Filtera	ble (TDS Type	Analyzed	SM2540C	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
	туре	Allalyzeu	F CN/SCN	QC .	Sample	Found	Offics	Nec	Lowel	Opper	KFD	LIIIII	Quai
WG248891													
WG248891PBW	PBW	07/28/08 9:25	DONIO 400	0.00		U	mg/L	407.7	-20	20			
WG248891LCSW	LCSW	07/28/08 9:26	PCN30199	260	500	280	mg/L	107.7	80	120	•	0.0	
L70728-01DUP	DUP	07/28/08 9:59			590	590	mg/L				0	20	
Selenium, disso	lved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.05073	mg/L	101.5	90	110			
WG249015 CB	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, dissolv	ed		M200.7 I	DP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WC24020E	7.	•								•			
WG249365									_				
WG249365 CV	ICV	08/04/08 23:52	11080717-3	100		100.13	mg/L	100.1	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.9	0.9			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	98.21624		98.7	mg/L	100.5	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	98.21624	180	273.57	mg/L	95.3	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	98.21624	180	267.05	mg/L	88.6	85	115	2.41	20	
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	100		96.34	mg/L	96.3	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.9	0.9			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	98.21624		98.33	mg/L	100.1	85	115			
L70727-01AS	AS	08/05/08 2:42	11080730-2	98.21624	149	243.47	mg/L	96.2	85	115			
L70727-01ASD	ASD	08/05/08 2:45	11080730-2	98.21624	149	241.57	mg/L	94.3	85	115	0.78	20	
Sulfate			SM4500 \$	SO4-D									
ACZ ID	Туре	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			WC090514.4	100			-	102					
L70737-01DUP	LCSW DUP	07/30/08 10:12	WC080514-1	100	670	103	mg/L	103	80	120	1 5	20	
	שטע	07/30/08 10:37			6/0	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	

(800) 334-5493

FMI Gold & Copper - Sierrita

Thallium, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.05099	mg/L	102	90	110			
WG249015 CB	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, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		0484	mg/L	96.8	90	110			
WG249015 CB	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 IC	Р									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249365													
WG249365 CV	ICV	08/04/08 23:52	11080717-3	2		1.933	mg/L	96.7	95	105			
WG249365 CB	ICB	08/04/08 23:55				U	mg/L		-0.03	0.03			
WG249365LFB	LFB	08/05/08 0:08	11080730-2	.5		.489	mg/L	97.8	85	115			
L70732-01AS	AS	08/05/08 1:21	11080730-2	.5	.01	.516	mg/L	101.2	85	115			
L70732-01ASD	ASD	08/05/08 1:24	11080730-2	.5	.01	503	mg/L	98.6	85	115	2.55	20	
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.896	mg/L	94.8	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.492	mg/L	98.4	85	115			
L70727-01AS	AS	08/05/08 2:42	11080730-2	.5	U	.503	mg/L	100.6	85	115			
L70727-01ASD	ASD	08/05/08 2:45	11080730-2	.5	U	.501	mg/L	100.2	85	115	0.4	20	

FMI Gold & Copper - Sierrita

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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By: Date Printed:

7/25/2008

Receipt Verification

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

YES	NO	NA
		Х
		^
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	
		Х
		Х

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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

ACZ Project ID: Date Received: Received By:

L70726 7/25/2008

d Bv:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L70726-01	IW-4		Υ		Υ							
L70726-02	IW-5		Υ		Υ							
L70726-03	IW-8		Υ		Υ							
L70726-04	IW-9		Υ		Υ							
L70726-05	IW-22		Υ		Υ							
L70726-06	IW-23		Υ		Υ							
L70726-07	IW-24		Υ		Υ							

Sample Container Preservation Legend

Description	Container Type	Preservative/Limits
Raw/Nitric	RED	pH must be < 2
Filtered/Sulfuric	BLUE	pH must be < 2
Filtered/Nitric	BLACK	pH must be < 2
Filtered/Nitric	GREEN	pH must be < 2
Raw/Sulfuric	ORANGE	pH must be < 2
Raw/NaOH	PURPLE	pH must be > 12 *
Raw/NaOH _Zinc Acetate	TAN	pH must be > 12
Raw/Sulfuric	YELLOW	pH must be < 2
Raw/Sulfuric	YELLOW GLASS	pH must be < 2
No preservative needed	Not applicable	
Gamma/Beta dose rate	Not applicable	must be $< 250 \ \mu R/hr$
	Raw/Nitric Filtered/Sulfuric Filtered/Nitric Filtered/Nitric Raw/Sulfuric Raw/NaOH Raw/NaOH_Zinc Acetate Raw/Sulfuric Raw/Sulfuric No preservative needed	Raw/Nitric RED Filtered/Sulfuric BLUE Filtered/Nitric BLACK Filtered/Nitric GREEN Raw/Sulfuric ORANGE Raw/NaOH PURPLE Raw/NaOH Zinc Acetate TAN Raw/Sulfuric YELLOW Raw/Sulfuric YELLOW GLASS No preservative needed Not applicable

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:		

	ratories, Inc.			57	26	CI	HAIN	of Cl	JST	ODY
2773 Downhill Drive Steambo Report to:	at Springs, CO_80487 (8	00) 334	4-5493		•					
Name: Bill Doccis	<u>_</u>		A alaba		<u> </u>	^		Λ.1		
	m Q Cincid	1				DUVE				
Company: Freeport Mc/ E-mail: billy-durrise	C. C.	-				AZ		/		
<u></u>	FMI. Com		l elep	onone:	5 ZO.	-648-	<u>88/5</u>			
Copy of Report to:		1			_					
Name: Dan Simpson	<u> </u>	_				<u>hginc</u>			_	
Company: Hydro Gre	Chem		Telep	hone:	520-	293-1	500 E	EXT 13	33	
Invoice to:										
Name:			Addr	ess:						
Company:										
E-mail:			Telep	hone:	-					
If sample(s) received past hold						-		YES		
analysis before expiration, shall								NO		
If "NO" then ACZ will contact of is indicated, ACZ will proceed we						مط النب حد	aualifiad			
PROJECT INFORMATION	nut the requested analyses	s, even				ED <i>(atta</i>			te num	iber)
Quote #:										50.7
Project/PO#: OJØ6D	7		ers	18						
Reporting state for complian		-	of Containers	1						
Sampler's Name:	ioo tooting.		Ö	1					ĺ	
Are any samples NRC license	able material?			100						
SAMPLE IDENTIFICATION	DATE:TIME	Matrix	#	Anbi					ĺ	
Iw-4	7-23-08/12:25	نداس	5	X						
Iw-5	7-23-08/12:48	Gw	5	X	-	<u> </u>		<u> </u>		
Iw-8	7-23-08/ 12:05	GW	5	X			_			
Iw-9	7-23-08/ 12:15	Gw	5	×						
Iw-22	7-23-08/13:25	GW	5	×						
IW-23	7-23-08/13:05	GW	5	X				1 "-1		
IW-24	7-23-08/12:40	GW	5	Х				1		
				. •						
Matrix SW (Surface Water) • 0	GW (Ground Water) · WW (Wa	aste Wat	er) · DV	V (Drinki	ng Water)	· SL (Slud	ge) · SO	(Soil) · C	L (Oil)	Other
REMARKS/ SAMPLE DISCLOS	URES									
Copy of Report to	Dan Simpson a	ontain	5 01	1/9 "5	504" 1	7250 its	ω:	+ L		
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Please refer RELINQUISHED BY:	to ACZ's terms & condi DATE:TII		ocated		e revers RECEIVEI		this CO		TE:TIV	5
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Analytical Report

August 08, 2008

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

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

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.

S. Habermehl





FMI Gold & Copper - Sierrita

Project ID: OJ06DZ Date Sampled: 07/23/08 11:05

Sample ID: IW-1 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	gkį

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	aki

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		ma/L	10	50	07/30/08 10:41	aki

FMI Gold & Copper - Sierrita

ACZ Sample ID: **L70737-04** Project ID: OJ06DZ Date Sampled: 07/23/08 13:15

Sample ID: IW-10 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

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Report H		

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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	0/4-83-020. Methods for	Chemical Analysis of	f Water and Wastes	March 1983.
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- (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: OJ06DZ

Alkalinity as CaC	O3		SM2320B	- Titration	ļ								
ACZ ID	Туре	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, disso	lved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.9	mg/L	95	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.09	0.09			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	1		.986	mg/L	98.6	85	115			
L70733-01AS	AS	08/05/08 3:18	11080730-2	1	15	15.214	mg/L	21.4	85	115			M:
L70733-01ASD	ASD	08/05/08 3:21	11080730-2	1	15	15.027	mg/L	2.7	85	115	1.24	20	M
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	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			
WG249015 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015ICV	ICV	07/20/09 42:50	MC000700 4	05		05154	ma/l	102 1	00	110			
	ICV	07/30/08 12:50	MS080722-4	.05		.05154	mg/L	103.1	90				
WG249015ICB	ICB	07/30/08 12:56	MC0007444	0.E		.00063	mg/L	00.4	-0.0015	0.0015			
WG249015LFB	LFB	07/30/08 13:08	MS080714-1	.05	0040	.04972	mg/L	99.4	85	115			
L70727-03AS L70727-03ASD	AS ASD	07/30/08 14:42 07/30/08 14:47	MS080714-1 MS080714-1	.05 .05	.0042	.0533	mg/L mg/L	98.2 97.6	70 70	130 130	0.58	20	
			M200.7 IC				9						
Barium, dissolve	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	PPD	Limit	Qual
	Type	Allalyzeu	1 011/0011	Q 0	Cample	Tourid	Offics	1160	Lowel	Opper	INI D		Quai
WG249368	ICV/	00/05/00 0 00	11000747.0	0		1.0004	pa a //	00.0	05	405			
WG249368ICV	ICV	08/05/08 2:09	11080717-3	2		1.9921	mg/L	99.6	95	105			
WG249368 CB	ICB	08/05/08 2:12	H000700 0	-		U 4000	mg/L	00.0	-0.009	0.009			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		4938	mg/L	98.8	85	115			
L70733-01AS	AS	08/05/08 3:18	11080730-2	.5	.051	.5573	mg/L	101.3	85	115	4 = 0	0.0	
L70733-01ASD	ASD	08/05/08 3:21	11080730-2	.5	.051	.5487	mg/L	99.5	85	115	1.56	20	

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Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		04874	mg/L	97.5	90	110			
WG249015 CB	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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG249015 CB	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, disso	lved		M200.7 I	CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	11080717-3	100		95.41	mg/L	95.4	95	105			
WG249409 CB	ICB	08/06/08 0:03				U	mg/L		-0.6	0.6			
WG249409LFB	LFB	08/06/08 0:16	11080730-2	67 97008		70.45	mg/L	103.6	85	115			
L70731-04AS	AS	08/06/08 0:22	11080730-2	67 97008	135	195.34	mg/L	88.8	85	115			
L70731-04ASD	ASD	08/06/08 0:26	11080730-2	67.97008	135	192.97	mg/L	85.3	85	115	1.22	20	
L70903-01AS	AS	08/06/08 1:25	11080730-2	67.97008	49.1	119.83	mg/L	104.1	85	115			
L70903-01ASD	ASD	08/06/08 1:28	11080730-2	67.97008	49.1	119.56	mg/L	103.7	85	115	0.23	20	
Chloride			SM45000	I-E									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249380													
WG249380 CV	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													
WG249460 CV	ICV	08/05/08 17:33	WI071212-1	54.945		56	mg/L	101.9	90	110			
WG249460 CB	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			

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Project ID: OJ06DZ

Chromium, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409 CV	ICV	08/05/08 23:59	11080717-3	2		1.929	mg/L	96.5	95	105			
WG249409 CB	ICB	08/06/08 0:03				U	mg/L		-0.03	0.03			
WG249409LFB	LFB	08/06/08 0:16	11080730-2	.5		.517	mg/L	103.4	85	115			
L70731-04AS	AS	08/06/08 0:22	11080730-2	.5	U	.511	mg/L	102.2	85	115			
L70731-04ASD	ASD	08/06/08 0:26	11080730-2	.5	U	.513	mg/L	102.6	85	115	0.39	20	
L70903-01AS	AS	08/06/08 1:25	11080730-2	.5	U	541	mg/L	108.2	85	115			
L70903-01ASD	ASD	08/06/08 1:28	11080730-2	.5	U	537	mg/L	107.4	85	115	0.74	20	
Cobalt, dissolved	l		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409 CV	ICV	08/05/08 23:59	11080717-3	2		1.94	mg/L	97	95	105			
WG249409 CB	ICB	08/06/08 0:03				U	mg/L		-0.03	0.03			
WG249409LFB	LFB	08/06/08 0:16	11080730-2	.5		525	mg/L	105	85	115			
L70731-04AS	AS	08/06/08 0:22	11080730-2	.5	U	523	mg/L	104.6	85	115			
L70731-04ASD	ASD	08/06/08 0:26	11080730-2	.5	U	.52	mg/L	104	85	115	0.58	20	
L70903-01AS	AS	08/06/08 1:25	11080730-2	.5	.02	.553	mg/L	106.6	85	115			
L70903-01ASD	ASD	08/06/08 1:28	11080730-2	.5	.02	552	mg/L	106.4	85	115	0.18	20	
Conductivity @2	5C		SM2510E	3									
ACZ ID	Туре	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	umhos/cm	101.2	90	110			
WG248934LCSW4	LCSW	07/28/08 20:27	PCN29501	1408.8		1426	umhos/cm	101.2	90	110			
WG248934LCSW7	LCSW	07/28/08 23:56	PCN29501	1408.8		1414	umhos/cm	100.4	90	110			
L70738-02DUP	DUP	07/29/08 1:34			455	455	umhos/cm				0	20	
WG248934LCSW10	LCSW	07/29/08 3:04	PCN29501	1408.8		1411	umhos/cm	100.2	90	110			
WG248934LCSW13	LCSW	07/29/08 6:02	PCN29501	1408.8		1402	umhos/cm	99.5	90	110			
Copper, dissolve	d		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.899	mg/L	95	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.488	mg/L	97.6	85	115			
L70733-01AS	AS	08/05/08 3:18	11080730-2	.5	.07	567	mg/L	99.4	85	115			
	ASD	08/05/08 3:21	11080730-2	.5	.07	.558	mg/L	97.6	85	115	1.6	20	

REPIN.01.06.05.01 Page 9 of 20

(800) 334-5493

FMI Gold & Copper - Sierrita

Cyanide, total			M335.4 - C	olorime	tric w/ distil	lation							
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			
WG249170 CB	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			
WG249173 CV1	ICV	07/31/08 14:35	WI080726-5	.3		.2693	mg/L	89.8	90	110			
WG249173 CB1	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-										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249168	, ,	•			•								
		07:04:00 40 40		_									
WG249168ICV	ICV	07/31/08 12:46	WC080725-1	2		2.01	mg/L	100.5	90	110			
WG249168 CB	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	R/
lron, dissolved			M200.7 ICI	Þ									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	11080717-3	2		1.923	mg/L	96.2	95	105			
WG249409 CB	ICB	08/06/08 0:03				U	mg/L		-0.06	0.06			
WG249409LFB	LFB	08/06/08 0:16	11080730-2	1		1.077	mg/L	107.7	85	115			
L70731-04AS	AS	08/06/08 0:22	11080730-2	1	U	1.096	mg/L	109.6	85	115			
L70731-04ASD	ASD	08/06/08 0:26	11080730-2	1	U	1.055	mg/L	105.5	85	115	3.81	20	
L70903-01AS	AS	08/06/08 1:25	11080730-2	1	4.58	5.358	mg/L	77.8	85	115			M:
L70903-01ASD	ASD	08/06/08 1:28	11080730-2	1	4.58	5.325	mg/L	74.5	85	115	0.62	20	M:
Lead, dissolved			M200.8 ICI	P-MS									
ACZ ID	Туре	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			
WG249015ICV WG249015ICB	ICB	07/30/08 12:56	1410000/22-4	.00		.04992 U	mg/L	55.0	-0.0003	0.0003			
** OZ4001010D		01100100 12.00					•						
WG2490151 ER	IFR	07/30/00 13:00	MS080714 1	05		UNGOO	ma/l	un L	9.5	115			
WG249015LFB L70727-03AS	LFB AS	07/30/08 13:08 07/30/08 14:42	MS080714-1 MS080714-1	.05 .05	U	.04629	mg/L mg/L	92.6 93.7	85 70	115 130			

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FMI Gold & Copper - Sierrita

Magnesium, di	ssolved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	11080717-3	100		97.44	mg/L	97.4	95	105			
WG249409 CB	ICB	08/06/08 0:03				U	mg/L		-0.6	0.6			
WG249409LFB	LFB	08/06/08 0:16	11080730-2	49.96908		51.85	mg/L	103.8	85	115			
L70731-04AS	AS	08/06/08 0:22	11080730-2	49.96908	69.6	117.23	mg/L	95.3	85	115			
L70731-04ASD	ASD	08/06/08 0:26	11080730-2	49.96908	69.6	117.63	mg/L	96.1	85	115	0.34	20	
L70903-01AS	AS	08/06/08 1:25	11080730-2	49.96908	15.5	69.06	mg/L	107.2	85	115			
L70903-01ASD	ASD	08/06/08 1:28	11080730-2	49.96908	15.5	68.97	mg/L	107	85	115	0.13	20	
Manganese, di	ssolved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	11080717-3	2		1.9574	mg/L	97.9	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.015	0.015			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.5148	mg/L	103	85	115			
L70733-01AS	AS	08/05/08 3:18	11080730-2	.5	1.22	1.6597	mg/L	87.9	85	115			
L70733-01ASD	ASD	08/05/08 3:21	11080730-2	.5	1.22	1.6373	mg/L	83.5	85	115	1.36	20	M
Mercury, disso	lved		M245.1	CVAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249012													
WG249012ICV	ICV	07/30/08 16:54	11080723-2	.00501		00522	mg/L	104.2	95	105			
WG249012 CB	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	11080711-8	.002		.00201	mg/L	100.5	85	115			
L70726-03LFM	LFM	07/30/08 19:10	11080711-8	.002	U	.00215	mg/L	107.5	85	115			
L70726-03LFMD	LFMD	07/30/08 19:12	11080711-8	.002	U	.00213	mg/L	106.5	85	115	0.93	20	
Molybdenum,	dissolved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.893	mg/L	94.7	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
	LFB	08/05/08 2:25	11080730-2	.5		.477	mg/L	95.4	85	115			
WG249368LFB													
WG249368LFB L70733-01AS	AS	08/05/08 3:18	11080730-2	.5	U	.49	mg/L	98	85	115			

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Nickel, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249409													
WG249409ICV	ICV	08/05/08 23:59	11080717-3	2		1.913	mg/L	95.7	95	105			
WG249409 CB	ICB	08/06/08 0:03				U	mg/L		-0.03	0.03			
WG249409LFB	LFB	08/06/08 0:16	11080730-2	.4985		.511	mg/L	102.5	85	115			
L70731-04AS	AS	08/06/08 0:22	11080730-2	.4985	.03	.539	mg/L	102.1	85	115			
L70731-04ASD	ASD	08/06/08 0:26	11080730-2	.4985	.03	.529	mg/L	100.1	85	115	1.87	20	
L70903-01AS	AS	08/06/08 1:25	11080730-2	.4985	.02	.549	mg/L	106.1	85	115			
L70903-01ASD	ASD	08/06/08 1:28	11080730-2	.4985	.02	547	mg/L	105.7	85	115	0.36	20	
Nitrate/Nitrite as I	N		M353.2 -	H2SO4 pre	eserved								
ACZ ID	Туре	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			
WG249318 CB	ICB	08/02/08 19:07				U	mg/L		-0.06	0.06			
WG249321													
WG249321 CV	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	U	2.02	mg/L	101	90	110			
_70737-01DUP	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 -	Electromet	tric								
ACZ ID	Туре	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			
_70738-02DUP	DUP	07/29/08 1:34		· ·	8.3	8.27	units				0.4	20	
WG248934LCSW12		07/29/08 3:18	PCN29627	6	0.0	6.41	units	106.8	90	110	• • •		
WG248934LCSW15		07/29/08 6:16	PCN29627	6		6.39	units	106.5	90	110			
Potassium, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368ICV	ICV	08/05/08 2:09	11080717-3	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	11080730-2	99.76186		100.44	mg/L	100.7	85	115			
	AS	08/05/08 3:18	11080730-2	99.76186	5.4	111.38	mg/L	106.2	85	115			
L70733-01AS													

Summary

ACZ Project ID: L70737

FMI Gold & Copper - Sierrita

Residue, Filteral	ole (TDS) @180C	SM2540C										
ACZ ID	Туре	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, disso	lved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.05073	mg/L	101.5	90	110			
WG249015 CB	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, dissolv	ed		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	100		96.34	mg/L	96.3	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.9	0.9			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	98.21624		98.33	mg/L	100.1	85	115			
L70733-01AS	AS	08/05/08 3:18	11080730-2	98.21624	5.5	107.65	mg/L	104	85	115			
L70733-01ASD	ASD	08/05/08 3:21	11080730-2	98.21624	5.5	105.94	mg/L	102.3	85	115	1.6	20	
Sulfate			SM4500 S	604-D									
ACZ ID	Туре	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, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249015													
WG249015 CV	ICV	07/30/08 12:50	MS080722-4	.05		.05099	mg/L	102	90	110			
WG249015 CB	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			
		07/30/08 14:47	MS080714-1			-	5						

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Uranium, dissolv	ved		M200.8 IC	P-MS									
ACZ ID	Туре	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			
WG249015 CB	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 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249368													
WG249368 CV	ICV	08/05/08 2:09	11080717-3	2		1.896	mg/L	94.8	95	105			
WG249368 CB	ICB	08/05/08 2:12				U	mg/L		-0.03	0.03			
WG249368LFB	LFB	08/05/08 2:25	11080730-2	.5		.492	mg/L	98.4	85	115			
L70733-01AS	AS	08/05/08 3:18	11080730-2	.5	12.3	11.778	mg/L	-104.4	85	115			M
L70733-01ASD	ASD	08/05/08 3:21	11080730-2	.5	12.3	11.66	mg/L	-128	85	115	1.01	20	М

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70737-01	WG249368	Aluminum, dissolved	M200.7 ICP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Manganese, dissolved	M200.7 CP	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Manganese, dissolved	M200.7 CP	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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).

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70737-04	WG249368	Aluminum, dissolved	M200.7 CP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG249409	Iron, dissolved	M200.7 CP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Date Printed: 7/25/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	
		Х
		Х

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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70737-01	IW-1		Υ		Υ							
L70737-02	IW-2A		Υ		Υ							
L70737-03	IW-3A		Υ		Υ							
L70737-04	IW-10		Υ		Υ							

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:	
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)	aboratories, Inc	4			37	Cŀ	HAIN of	CUST	CODY
Report to:	94, 00 00,0	(200) 00	, 0,00						
Name: Bill Dor	ri5		Addr	ess: 6	200 W	Duval	Mine 1	Rd	
Company: Freeport	McMoRan Sierrita					AZ			
E-mail: billy dorn			1		• -	648-88	•		
Copy of Report to:									
Name: Dan 5:m	0500		E-ma	il: da	ns@h	ginc co	om		
Company: Hydro G			1			_	Ext. 1	33	
Invoice to:									
Name:			Addr	ess:					
Company:									
E-mail:			Telep	ohone:					
analysis before expiratio	st holding time (HT), or if insu on, shall ACZ proceed with requ ntact client for further instruc	uested sho	rt HT a	nalyses	?			ES L	
	oceed with the requested analy					ta will be o	qualified.		
PROJECT INFORMATIO							ch list or use	quote nu	ımber)
Quote #:			ŞO.	18					
Project/PO #: DJ	TOBDZ		of Containers	1 .					
Reporting state for co	ompliance testing:	_	onta	13					
Sampler's Name:		_	ŭ	916					
Are any samples NRC		Motris	*	Ambient-					
SAMPLE IDENTIFICA	······	Matrix		 `					-
IW-1	7-23-08/11:03 7-23-08/11:20		5	×	 -		 		+
IW-ZA	7-23-08/11:47		5	× ×					
Iw-3A Iw-10	7-23-08/ 13:1.		5	X					
10-10	7-43-607-73.7.		 -					+	+
		-						1	1
									†
Matrix SW (Surface Wa	ater) · GW (Ground Water) · WW	(Waste Wat	ter) • D	W (Drink	ing Wa ter)	· SL (Slud	ge) • SO (Soil	· OL (Oil) Othe
REMARKS/ SAMPLE DI									
Copy of Report	to Dan Simpson	conta	ins (only	"50y"	results	with G	IC SUN	nmavy.
									I AGE
	# 12 867 7E4 Q.					:	this COC	÷	of
RELINQUISH	e refer to ACZ's terms & co	:TIME	ocated		RECEIVE		this coc.	DATE:T	IMF
$AM \perp Q$		15:00		16	%	7-71,	\ <i>J</i> .	9508 N	
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5014 0050 00 05 00			. "	.	,	D ₀	70 of	20	

August 18, 2008

Report to:

Bill Dorris

FMI Gold & Copper - Sierrita

P.O. Box 527

Green Valley, AZ 85622-0527

cc: Dan Simpson

Bill to:

Accounts Payable

FMI Gold & Copper - Sierrita

P.O. Box 2671

Phoenix, AZ 85002-2671

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.

S. Habermehl





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	*	ma/L	1	5	08/08/08 22:45	am

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	am

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	am

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	*	ma/l	10	50	08/08/08 23:03	am

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	*	ma/L	0.5	3	08/08/08 23:21	am

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

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

Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

ACZ Project ID: L70780

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

08/08/08 21:33 WI080702-9

WI080521-1

WI080702-9

WI080702-9

08/08/08 21:51

08/11/08 15:32

08/11/08 15:50

08/12/08 14:40

08/13/08 15:49

FMI Gold & Copper - Sierrita

AS

DUP

ICV

ICB

LFB

LFB

Project ID: OJ069R

L70666-03AS

L70666-03DUP

WG249663ICV

WG249663ICB

WG249663LFB1

WG249663LFB2

Sulfate	e 300.0 - Ion Chromatography												
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249363													
WG249363 CV	ICV	08/04/08 16:30	WI080521-1	50.1		49.97	mg/L	99.7	90	110			
WG249363 CB	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													
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													

108

108

157.7

110.7

49.34

U

30.95

30.43

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

82.8

98.5

103.2

101.4

90

90

-1.5

90

90

110

110

1.5

110

110

2.5

20

M2

60

50.1

30

30

Page 9 of 14

Inorganic Extended
Qualifier Report

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.

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: L70780

No certification qualifiers associated with this analysis



Sample Receipt

FMI Gold & Copper - Sierrita

OJ069R

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

Received By:

Date Printed: 7/29/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
		Х
		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ069R

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L70780-01	ESP-1									Χ		
L70780-02	ESP-2									Х		
L70780-03	ESP-3									Х		
L70780-04	ESP-4									Χ		
L70780-05	M-8									Χ		
L70780-06	M-20									Χ		

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:		

2773 Downhill Drive Steamboa	ratories t Springs, CO	•	00) 334	-5493	27	8		CHA	AIN (of Cl	UST	ODY
Report to: Name: Bill Dorris Company: Freeport Mci E-mail: billy-dorris@				6	Erece	6200 1 Val 856	ley,		J M	ine A	2)	
Copy of Report to:												
Name: Dan Simpson			-			anso						
Company: Hydro Geo C	hem_			Telep	hone:	520-	293	-150 c) E 2	×T_	<u> 133</u>	
Invoice to:												
Name:				Addre	ess:							
Company:												
E-mail:				Telep	hone:			••			,	·
If sample(s) received past holding	• • • • • • • • • • • • • • • • • • • •					-				YES		.
analysis before expiration, shall . If "NO" then ACZ will contact cli										NO	L]
is indicated, ACZ will proceed wi							data wi	ll be qu	alified.			
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REMARKS/ SAMPLE DISCLOS	URES											
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August 15, 2008

Report to:

Bill Dorris

FMI Gold & Copper - Sierrita

P.O. Box 527

Green Valley, AZ 85622-0527

cc: Dan Simpson

Bill to:

Accounts Payable

FMI Gold & Copper - Sierrita

P.O. Box 2671

Phoenix, AZ 85002-2671

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

S. Habermehl

Scott Habermehl has reviewed and approved this report.





FMI Gold & Copper - Sierrita ACZ Sample ID: L70781-01 Project ID: PO#OJ069R Date Sampled: 07/14/08 11:30

Sample ID: MO-2007-1A 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	Н *	ma/L	0.5	3	08/12/08 5:00	am

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	Н *	ma/l	0.5	3	08/12/08 5:18	am

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 X0	Q Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	165	Н *	ma/L	3	10	08/12/08 5:36	am

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	Н *	ma/L	5	30	08/12/08 5:54	am

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

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	am

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	am

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	*	ma/L	10	50	08/12/08 7:43	am

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	*	ma/L	0.5	3	08/12/08 8:37	am

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	*	ma/L	0.5	3	08/12/08 8:55	am

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	*	ma/L	0.5	3	08/12/08 9:14	am

MO-2007-4B

Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

ACZ Sample ID: **L70781-12**Date Sampled: 07/18/08 11:24

Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Sample ID:

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

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	*	ma/L	0.5	3	08/12/08 9:50	am

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		ma/L	0.5	3	08/12/08 10:26	am

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

MO-2007-5C

Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R ACZ Sample ID: L70781-16

Date Sampled: 07/24/08 11:30 Date Received: 07/29/08

Sample Matrix: Ground Water

Wet Chemistry

Sample ID:

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	am

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		ma/L	0.5	3	08/12/08 12:33	am

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		ma/L	0.5	3	08/12/08 12:51	am

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

Report H		

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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	0/4-83-020. Methods for	Chemical Analysis of	f Water and Wastes	March 1983.
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- (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.

1.6

0.5

110

110

110

20

20

ACZ Project ID: L70781

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

FMI Gold & Copper - Sierrita

Project ID: PO#OJ069R

DUP

AS

DUP

LFB

LFB

08/12/08 6:31

08/12/08 10:44

08/12/08 11:02

08/12/08 14:40

08/13/08 15:49

WI080702-9

WI080702-9

WI080702-9

L70781-04DUP

L70781-14DUP

WG249663LFB1

WG249663LFB2

L70781-14AS

Sulfate		300.0 - Ion Chromatography											
ACZ ID	Туре	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	
WG249663ICV	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

472

35.1

35.1

30

30

30

479.4

62.52

34.94

30.95

30.43

mg/L

mg/L

mg/L

mg/L

mg/L

91.4

103.2

101.4

90

90

90

Page 21 of 27

FMI Gold & Copper - Sierrita

ACZ Project ID: L70781

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70781-01	WG249663	Sulfate	300.0 - Ion Chromatography	НС	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	нС	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	нс	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	НС	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	НС	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	НС	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



Sample Receipt

FMI Gold & Copper - Sierrita

PO#OJ069R

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

Received By: Date Printed:

7/29/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
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		Х
		Х

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (μR/hr)
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

Sample Receipt

FMI Gold & Copper - Sierrita

PO#OJ069R

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

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B<2	0 < 2	T >12	N/A	RAD	ID
L70781-01	MO-2007-1A				· · · ·		· · · ·			Х		
L70781-02	MO-2007-1B									Χ		
L70781-03	MO-2007-1C									Χ		
L70781-04	MO-2007-2									Χ		
L70781-05	MO-2007-3B									Χ		
L70781-06	DUP071408A									Χ		
L70781-07	MO-2007-3C									Х		
L70781-08	I-10									Х		
L70781-09	M-9									Χ		
L70781-10	M-10									Χ		
L70781-11	MO-2007-4A									Χ		
L70781-12	MO-2007-4B									Χ		
L70781-13	MO-2007-4C									Χ		
L70781-14	DUP071808A									Χ		
L70781-15	MO-2007-5B									Χ		
L70781-16	MO-2007-5C									Χ		
L70781-17	MO-2007-6A									Χ		
L70781-18	MO-2007-6B									Χ		

Sample Container Preservation Legend

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

* p⊦	check	performed	by	analy	st p	rior t	0 S	ampl	e pr	epara	tion
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Sample IDs Reviewed By:	

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Analytical Report

August 18, 2008

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

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

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.

S. Havermehl

Scott Habermehl has reviewed and approved this report.





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

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		ma/l	10	50	08/06/08 10:59	ilf

FMI Gold & Copper - Sierrita

ACZ Sample ID: **L70901-02** Project ID: OJ06DZ Date Sampled: 07/29/08 08:45

Sample ID: IW-21 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	ilf

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	ilf

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		ma/L	10	50	08/06/08 11:11	ilf

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		ma/L	50	250	08/06/08 11:15	ilf

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 X	Q Units	MDL	PQL	Date	Analyst
Sulfate	SM4500 SO4-D	20	В *	ma/L	10	50	08/07/08 10:54	tbd

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	*	ma/L	10	50	08/07/08 10:58	tbd

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

Report	Header	Expl	anat	ions

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, in % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

QC Sample Types

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

QC Sample Type Explanations

Blanks Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Control Samples Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

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.

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Alkalinity as CaC	.03		SM2320B	Titration									
Alkalinity as CaC		Analyzad				Found	Unito	Boo	Lower	Unnor	BBD	Limit	Ovol
ACZ ID	Туре	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, disso	lved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995 CV	ICV	08/15/08 1:18	11080717-3	2		1.985	mg/L	99.3	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.09	0.09			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	1		.981	mg/L	98.1	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	1	U	1.084	mg/L	108.4	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	1	U	1.063	mg/L	106.3	85	115	1.96	20	
Antimony, dissol	ved		M200.8 IC	P-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535 CV	ICV	08/08/08 7:22	MS080722-4	.02006		.02105	mg/L	104.9	90	110			
WG249535 CB	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, dissolve	ed		M200.8 IC	P-MS									
ACZ ID	Туре	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		.05114	mg/L	102.3	90	110			
WG249535 CB	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, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
	ICV	08/15/08 1:18	11000717.2	2		2 0024	ma/l	100.1	05	105			
WG249995 CV WG249995 CB	ICV ICB	08/15/08 1:18	11080717-3	2		2.0021 U	mg/L mg/l	100.1	95 -0.009	0.009			
WG249995LFB	LFB	08/15/08 1:22	11080811-3	5		.4978	mg/L mg/l	99.6		115			
L70888-08AS	AS	08/15/08 1:37	11080811-3	.5 .5	.091	6193	mg/L mg/l	99.6 105.7	85 85	115			
L70888-08ASD	ASD	08/15/08 2:35	11080811-3	.5 .5	.091	6327	mg/L mg/L	108.7	85 85	115	2.14	20	
E10000-00A3D	700	00113100 2.38	11000011-3		.081	.0321	mg/L	100.3	oo	110	4.14	20	

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Beryllium, diss	olved		M200.8 IC	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
WG249535ICV	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			
WG249535LFB	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, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG249535LFB	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, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	11080717-3	100		94.92	mg/L	94.9	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.6	0.6			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	67 97008		65.88	mg/L	96.9	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	67.97008	67.7	130.82	mg/L	92.9	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	67.97008	67.7	133.12	mg/L	96.2	85	115	1.74	20	
Chloride			SM4500C	I-E									
ACZ ID	Туре	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			
WG249822ICV	ICV	08/12/08 11:29	WI080808-1	54.945		57.2	mg/L	104.1	90	110			
WG249822LFB2	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	
WG249822LFB1	LFB	08/12/08 13:01	WI080620-3	30		31.2	mg/L	104	90	110			
Chromium, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995 CV	ICV	08/15/08 1:18	11080717-3	2		1.9	mg/L	95	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.03	0.03			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	.5		49	mg/L	98	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	.5	U	.507	mg/L	101.4	85	115			

FMI Gold & Co Project ID:		- Sierrita J06DZ						ACZ F	Project II	D: L70	901		
Cobalt, dissolved	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG250065													
WG250065 CV	ICV	08/15/08 13:04	11080717-3	2		1.902	mg/L	95.1	95	105			
WG250065 CB	ICB	08/15/08 13:08				U	mg/L		-0.03	0.03			
WG250065LFB	LFB	08/15/08 13:21	11080811-3	.5		.499	mg/L	99.8	85	115			
L70896-01AS	AS	08/15/08 14:11	11080811-3	.5	U	.455	mg/L	91	85	115			
L70896-01ASD	ASD	08/15/08 14:14	11080811-3	.5	U	.456	mg/L	91.2	85	115	0.22	20	
Conductivity @2	5C		SM2510E	3									
ACZ ID	Туре	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	umhos/cm	102	90	110			
WG249346LCSW4	LCSW	08/04/08 18:07	PCN29501	1408.8		1446	umhos/cm	102.6	90	110			
WG249346LCSW7	LCSW	08/04/08 21:16	PCN29501	1408.8		1447	umhos/cm	102.7	90	110			
WG249346LCSW10	LCSW	08/05/08 1:36	PCN29501	1408.8		1453	umhos/cm	103.1	90	110			
L70903-08DUP	DUP	08/05/08 2:58			15000	15080	umhos/cm				0.5	20	
WG249346LCSW13	LCSW	08/05/08 4:10	PCN29501	1408.8		1464	umhos/cm	103.9	90	110			
Copper, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995 CV	ICV	08/15/08 1:18	11080717-3	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	11080811-3	.5		.493	mg/L	98.6	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	.5	U	.528	mg/L	105.6	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	.5	U	.541	mg/L	108.2	85	115	2.43	20	
Cyanide, total			M335.4 -	Colorimet	ric w/ distil	ation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249462													
	10)/	00/05/00 47/50	WI000700 F	2		2000	no a /I	00.0	00	110			
WG249462 CV WG249462 CB	ICV ICB	08/05/08 17:52 08/05/08 17:53	WI080726-5	.3		.2968 U	mg/L mg/L	98.9	90 -0.015	110 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	11.0007202		U	U	mg/L	.01.0	00		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													
WG249549 CV	ICV	08/06/08 18:07	WI080726-5	.3		.2716	mg/L	90.5	90	110			
WG249549 CB	ICB	08/06/08 18:08				U	mg/L		-0.009	0.009			
WG249552													
WG249552 CV	ICV	08/06/08 18:27	WI080726-5	.3		.2735	mg/L	91.2	90	110			
WG249552 CB	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			

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Fluoride			SM4500F	:-C									
ACZ ID	Туре	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			
WG249758 CB	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 I	CP									
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	11080717-3	2		1.919	mg/L	96	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.06	0.06			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	1		1.005	mg/L	100.5	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	1	.02	1.085	mg/L	106.5	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	1	.02	1.12	mg/L	110	85	115	3.17	20	
Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	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			
WG249535 CB	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, diss	solved		M200.7 I	CP									
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	11080717-3	100		96.24	mg/L	96.2	95	105			
WG249995ICB	ICB	08/15/08 1:22		.00		U	mg/L	00.2	-0.6	0.6			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	49.96908		48.84	mg/L	97.7	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	49.96908	158	201.28	mg/L	86.6	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	49.96908	158	204.78	mg/L	93.6	85	115	1.72	20	
Manganese, diss	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	11080717-3	2		1.9109	mg/L	95.5	95	105			
WG249995ICB	ICB	08/15/08 1:22		-		U	mg/L	23.0	-0.015	0.015			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	.5		.513	mg/L	102.6	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	.5	.017	5559	mg/L	107.8	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	.5	.017	.571	mg/L	110.8	85	115	2.68	20	

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Mercury, dissol	ved		M245.1 C	VAA									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249436													
WG249436 CV	ICV	08/06/08 12:31	11080723-2	.00501		.00513	mg/L	102.4	95	105			
WG249436 CB	ICB	08/06/08 12:33				U	mg/L		-0.0002	0.0002			
WG249509							Ü						
WG249509LRB	LRB	08/06/08 17:48				U	mg/L		-0.00044	0.00044			
WG249509LFB	LFB	08/06/08 17:50	11080711-8	.002		.00178	mg/L	89	85	115			
L70856-01LFM	LFM	08/06/08 17:55	11080711-8	.002	U	.00188	mg/L	94	85	115			
L70856-01LFMD	LFMD	08/06/08 17:58	11080711-8	.002	U	.00182	mg/L	91	85	115	3.24	20	
Molybdenum, d	issolved		M200.7 (CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	11080717-3	2		1.925	mg/L	96.3	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.03	0.03			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	.5		484	mg/L	96.8	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	.5	.04	.508	mg/L	93.6	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	.5	.04	.506	mg/L	93.2	85	115	0.39	20	
Nickel, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG250065													
WG250065 CV	ICV	08/15/08 13:04	11080717-3	2		1.904	mg/L	95.2	95	105			
WG250065 CB	ICB	08/15/08 13:08				U	mg/L		-0.03	0.03			
WG250065LFB	LFB	08/15/08 13:21	11080811-3	.4985		.496	mg/L	99.5	85	115			
L70896-01AS	AS	08/15/08 14:11	11080811-3	.4985	U	.443	mg/L	88.9	85	115			
L70896-01ASD	ASD	08/15/08 14:14	11080811-3	4985	U	.442	mg/L	88.7	85	115	0.23	20	
Nitrate/Nitrite as	s N		M353.2 -	H2SO4 pr	eserved								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qua
WG249722													
WG249722 CV	ICV	08/09/08 16:33	WI080613-1	2.416		2.422	mg/L	100.2	90	110			
WG249722 CB	ICB	08/09/08 16:34				U	mg/L		-0.06	0.06			
WG249724													
WG249724 CV	ICV	08/09/08 17:02	WI080613-1	2.416		2.45	mg/L	101.4	90	110			
WG249724 CB	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	
WG249724LFB2	LFB	08/09/08 17:43	WI080312-1	2		1.947	mg/L	97.4	90	110			

(800) 334-5493

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

L70901-02ASD

ASD

08/08/08 8:12

MS080805-4

.1

.0013

.11116

mg/L

109.9

70

130

2.66 20

pH (lab)			M150.1 -	Electromet	ric								
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, disso	lved		M200.7 I	CP									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	11080717-3	20		20.33	mg/L	101.7	95	105			
WG249995 CB	ICB	08/15/08 1:22				U	mg/L		-0.9	0.9			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	99.76186		102.56	mg/L	102.8	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	99.76186	2.6	119.14	mg/L	116.8	85	115			MA
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	99.76186	2.6	117.26	mg/L	114.9	85	115	1.59	20	
Residue, Filterab	le (TDS	s) @180C	SM25400										
ACZ ID	Туре	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, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	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		.05182	mg/L	103.6	90	110			
WG249535 CB	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			

Summary

ACZ Project ID: L70901

FMI Gold & Copper - Sierrita

Project ID: OJ06DZ

Sodium, dissolv	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249995													
WG249995ICV	ICV	08/15/08 1:18	11080717-3	100		100.4	mg/L	100.4	95	105			
WG249995 CV	ICV	08/15/08 1:18	11080717-3	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			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	98.21624		101.72	mg/L	103.6	85	115			
WG249995LFB	LFB	08/15/08 1:37	11080811-3	98.21624		101.2	mg/L	103	85	115			
L70888-08AS	AS	08/15/08 2:35	11080811-3	98.21624	367	454.77	mg/L	89.4	85	115			
L70888-08ASD	ASD	08/15/08 2:39	11080811-3	98.21624	367	463.53	mg/L	98.3	85	115	1.91	20	
Sulfate			SM4500	SO4-D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249485													
WG249485PBW	PBW	08/06/08 9:45				12	mg/L		-30	30			
WG249485LCSW	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							ŭ						
WG249574PBW	PBW	08/07/08 10:15				U	mg/L		-30	30			
WG249574LCSW	LCSW	08/07/08 10:18	WC080514-1	100		99	mg/L	99	80	120			
L70901-07DUP	DUP	08/07/08 11:02	***************************************	100	U	U	mg/L	33	00	120	0	20	R/
Thallium, dissol	ved		M200.8 I	CP-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		,00		0002	mg/L	.00.0	-0.0003	0.0003			
WG249535LFB	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, dissolv	/ed		M200.8 I	CP-MS									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG249535													
	ICV	00/00/00 7:22	MS080722 /	05		05117	ma/l	102.2	00	110			
WG249535 CV WG249535 CB	ICV	08/08/08 7:22 08/08/08 7:28	MS080722-4	.05		.05117	mg/L	102.3	90 -0.0003				
WG249535LFB	ICB LFB	08/08/08 7:40	MS080805-4	.05		.00015	mg/L	100.8	-0.0003 85	0.0003 115			
L70901-02AS	AS	08/08/08 8:05	MS080805-4	.03	.0291	13584	mg/L mg/L	106.7	70	130			
L70901-02ASD	ASD	08/08/08 8:12	MS080805-4	.1	.0291	13708	mg/L	100.7	70 70	130	0.91	20	
							9/ =						
Zinc, dissolved	Tuno	Analyzed	M200.7 I	QC QC	Sample	Found	Unito	Rec	Lower	Upper	RPD	Limit	Qual
	Туре	Ananyzeu	—I GN/SCN		Sample		- Onits	- Nec		- Opper	KP		
WG250065													
WG250065ICV	ICV	08/15/08 13:04	11080717-3	2		2.004	mg/L	100.2	95	105			
WG250065 CB	ICB	08/15/08 13:08				U	mg/L		-0.03	0.03			
WG250065LFB	LFB	08/15/08 13:21	11080811-3	.5		.502	mg/L	100.4	85	115			
	AS	08/15/08 14:11	11080811-3	.5		.469	mg/L	93.8	85	115	_		
L70896-01AS L70896-01ASD					U U		•				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 (< $10x \text{MDL}$).
	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 (< $10x \text{MDL}$).
	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 (< $10x \text{MDL}$).
	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).

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: L70901

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L70901-06	WG249995	Potassium, dissolved	M200.7 ICP	МА	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 CP	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



Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

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

Received By:

Date Printed: 8/1/2008

Receipt Verification

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

YES	NO	NA
		Х
Х		
		Х
Х		
Х		
Х		
Х		
Х		
Х		
		Х
	Х	
		Х
		Х

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

N/A

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

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

Sample Receipt

FMI Gold & Copper - Sierrita

OJ06DZ

ACZ Project ID: Date Received:

L70901 8/1/2008

Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0 < 2	T >12	N/A	RAD	ID
L70901-01	IW-11		Υ		Υ							
L70901-02	IW-21		Υ		Υ							
L70901-03	MH-11		Υ		Υ							
L70901-04	MH-12		Υ		Υ							
L70901-05	MH-10		Υ		Υ							
L70901-06	EB073108A		Υ		Υ							
L70901-07	TB073108A		Υ		Υ							

Sample Container Preservation Legend

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

^{*} pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By:		
. ,		

ACZ Labe	oratories, Inc. \		01	\bigcirc	1	Cŀ	IAIN	of Cl	JST(ODY
2773 Downhill Drive Steamb	ooat Springs, CO 80487 (80	<i>90) 334</i>	-5493		1					
Report to:										
Name: Bill Dorris		-	Addre	ess: 6	200 0	U DUV	16/11	Pine.	Rd_	
Company: Freeport M	McMoken Sierrita	-		51801	1 V21	lley 11 648	⁷ Z			
E-mail: billy-dorris	@fmi, com	_	Telep	hone:	520	648	88	73		
Copy of Report to:										
Name: Dan Simps	cΛ		E-mai	1: da	n5@	hainc.	Com			
Company: Hydro Geo						- 293-		EXT	13	3
Invoice to:										
Name:			Addre	ess:						
Company:	· · · · · · · · · · · · · · · · · · ·									
E-mail:			Telep	hone:	•					
If sample(s) received past ho	lding time (HT), or if insuffic	ient HT	· 		mplete			YES		
analysis before expiration, sh	•			_				NO]
If "NO" then ACZ will contact is indicated, ACZ will proceed						ıta will be d	nualified			
PROJECT INFORMATION	With the requested analyses	s, even i				TED (attac			ote nun	nber)
Quote #:								· · · · · · · · · · · · · · · · · · ·		
Project/PO #: つ ブッ	4 D 7	-	ers	128						
Reporting state for compli		1	# of Containers	1						
Sampler's Name:	idiloo tostiiig.	1	<u>6</u>	R						
Are any samples NRC licer	nsahle material?	1	o de	18						
SAMPLE IDENTIFICATION		Matrix		The state of the s						
IW-11	7-29-08/8:30	GW	5	×						
IW-21	7-29-08 / 8:45	GW	5	X						
MH-11	7-29-08/ 13:15	GW	5	×						
MH-12	7-30-08/12:25	GW	5	×						
MH-10	7-31-08/11:10	Gw	5	×						
EB073108A	7-31-08/7:45	GW	5	X						
TB073108A	7-31-08 / 7:45	GW	5	X		:		•		
	7									
Matrix SW (Surface Water)	· GW (Ground Water) · WW (W	aste Wat	er) - DV	V (Drink	ing W ater) · SL (Slud	ge) · SO	(Soil) - (OL (Oil)	· Other
REMARKS/ SAMPLE DISCLO	OSURES									
Copy of report	to Dan Simpson	Con	tain:	5 00	14 "5	Ou" re	50/+	5 111	1/	
QC Summary.	•				·	•			1	PAGE
LIDE TOALVIA	VG # 12 867 -	7F4	23	1000	567	2				of
- · ·	er to ACZ's terms & cond						this C	DC.	ļ	
RELINQUISHED B			-catet		RECEIVE		u 113 C(ATE:TI	ME
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voing 1. Com	7 77-00/ 7.	~ 00		WK.	$\overline{}$.	07	<u> </u>	<u> </u>
			<u> </u>	<u> </u>				1		
EBMADOEO 02 OE 02	White Deturn with come	.]. }	/ollow	D-t-:	· · · · · · · · · · · · · · · · · · ·	D.	20	2 of 2	-	

APPENDIX C HYDRO GEO CHEM, INC. GROUNDWATER SAMPLING FORMS



Project No.	7830000			c	lient:	Freeport-McMol	`	nc.
Task No.	6.2				oate:	1-1-0	· 8 	
Well ID:	CC	of GV		v	Veather:	Clear		
ADWR No.	50	1760			Collected By:	M. Ar.	16500	
				WELL	DATA			
Well Depth (ft bis)	:	85	5		Time:	12:07		
Casing Diameter ((in):	16	11		Point of Measur	rement:	TOC	
Static Water Leve		261.	09		GPS:	See fi	<u>le</u>	
1 Casing Volume		620	4		Elevation:	See F	ile	
3 Casing Volume		186	13	22 min				
5 Casing volume.	3 (garo).							
			F	IELD SAM	PLING DATA			
Time	Discharge Rate	Total Discharge	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
1716	(gpm) -	(gallons)	6.58	26.0	741	Clear	No	Prempos at 12:
12:15	11	5100	6.80	24.1	747	l r	ť '	
12:21	1,	7650	6-82	23,8	751_	٤.	11	
12:25	11	11,050	6.88	23.7	744	3.4	11	
12:29	11	14,450	6.92	23.7	739	1.		
12:34	11	18,700	6.97	23.7	736	1 4	t'r	
					700	1900		
		Total	Disch	unge -	20,7	V ga i		
				V			v2	
				SAMPLEI	NEGRMATION			
Samp	ole ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CLOF	GU-F	12:36	Plastic	250 ml	1	EPA 300.0	None	Filtered
CL of		12:36	Plastic	250 ml	1	EPA 300.0	None	Unfiltered
				1	off fire	72 hrs. 0	rior tes	w/ measure
Additional Com	Ł		veil na	s pre	VIT 101	,	<u> </u>	
One	Sample	9,						



Project No.	7830000				Client:	Freenort-McM	oRan Sierrita I	nc
Project No.	and the second s					Treeport-wich)	110.
Task No.	6.2	.)_ R	o dit & Managara and a Milana and Assaultane		Date:	1711-03	<u> </u>	
Well ID:		71185			Weather:	Putty	1000	
ADWR No.	621	1483			Collected By:	<u> </u>	$\stackrel{?}{\cdot}$	
				38751	L DATA			
					EDATA			
Well Depth (ft bis):	501			Time:	08	(0)	
Casing Diameter	(in):				Point of Measur	ement:	TOC_	
Static Water Leve	el (ft bmp):	770	,95		GPS:	Soch	_	
1 Casing Volume		240	3		Elevation:	Se + fi	\c_	
3 Casing Volume		777	09	Geom's				e e periode commence de la commence de la commence de la commence de la commence de la commence de la commence
3 Cashing Volume	s (gais).			COLDINA A	1			
			F	FIELD SAN	IPLING DATA			38 (82)
Time	Discharge Rate	Total Discharge	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
09:19	(gpm)	(gallons)	7.42	255	Ч96	Kintbon	V o	
09.24	825	875	7.56	25.7	190	10	No	
0479	125	1500	7.57	52.8	498	1(1 (
0934	125	2125	7.58	55.8	484	almostelea	- 4	
0935	100	2-625	フィブナ	25.8	486	V /	11	
0948	100	3525	7.57	25.8	484	+5,00	l (
0955	100	4225	7.58	61	483	clear		
1005	100	5225	7.06	10	784	dear		
1015	100	6225	7.55	11	454	1(1 (
1025 4	100	7225	7.53	25.7	484	1(<i>J</i> (
			CANADA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA TARIBA					genyagigi Nobilandi Cirilaharan kemadang April dan sasaran pantakan diberat
				SAMPLE	NFORMATION			
Sampi	e ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
Clun	3F	10:30	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW	3	10:30	Plastic	250 mi	1	EPA 300.0	None	Ùnfiltered
	nents:	1100					Annual Control of the	

raditional committee.		
		*-
	de.	
	*	



roject No.	7830000				Client: F	reeport-McMo	***************************************	nc.
ask No.	6.2				Date: _	7-8-0		
Vell ID:	Ch	1-6		\	Weather: _	Cloud	4	
DWR No.	62	7485			Collected By:	Cloud,	neson	
				WELL	. ATAD			
Well Depth (ft bis)		840),		Time: _	10:05		
		16	11		Point of Measure	ment:	TOC	
Casing Diameter		Z53.	80		GPS:	Sep F	:)e	
Static Water Leve		6127			Elevation:	See	Ci/e	
1 Casing Volume							<u></u>	
3 Casing Volume	s (gals):	1836	0	RIMES				
			F	IELD SAN	IPLING DATA			
Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
10:11	800	3700	7.25	77.1	397	Clear	No	Propon 10:07
10:15	11	6400	7,31	77.3	401	11	10	
10:19	1/	9600	7,34	27,4	408	111	11	
10:23	(/	12,800	7.41	27.2	413	1,	11	
10:27	7 (16,000	7.43	27,2	4/6	/ (
and the second s								
	1	11/) . [e = 9:40	1/2	400 e	ral	
	10	ful	1,50h	arge	10,	1	- 1	
				SAMPLE	INFORMATION			
Samp	oie ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-61	F	10:30	Plastic	250 ml	1	EPA 300.0	None	Filtered
(w-6		10:30	Plastic	250 ml		EPA 300.0	None	Unfiltered
Additional Con	nments:	This	well) was	off for	8 hrs p	wor to	w measure
	· · · · · · · · · · · · · · · · · · ·							



Project No.	7830000				Client:	Freeport-McM	oRan Sierrita	inc.
Task No.	6.2				Date:	7-8-0) \ \	
Well ID:	C	W-7			Weather:	Cloud	2y	
ADWR No.	50;	2546			Collected By:	M. F	rnesor	1
				WELL	DATA			
Well Depth (ft bis	s):	1065	-1 >		Time:	<u> /2:50</u>)	
Casing Diameter	(in):	16	11		Point of Measur	ement:	TOC	
Static Water Leve	_	429	3.40		GPS:	Sel	ile.	
1 Casing Volume	_	60	49		Elevation:	See	File	
3 Casing Volume	•	199	747	17min				
o casing volume	.s (gais).	/ L L		/ /				
			S F	IELD SAM	IPLING 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	Pumpon ex 130E
1305	360 dm/h	3600	7.11	27.8	1993	11	11	Some sediment
1308	1200	9600	7.12	27.8	5056	clear	No	
1312	11	14400	7.15	27.8	2013	9.4	11	
13/6	1(19200	2.11	27.9	2037	11	И	
								-
	10	rol t)(<,)	4/90	2)	600	Gal	
	101						J	
				SAMPLE II	NEORMATION			
Samp	le ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-7	F	13/8	Plastic	250 ml	1	EPA 300.0	None	Filtered
CW-	7	1318	Plastic	250 ml	1	EPA 300.0	None	Unfiltered
Additional Com	ments:	This.	// 1	and but	t been ru	en Since	, 20	
Additional Com	ments.		ven -	INS FFE	V DOON ! C	with the second		The state of the s



roject No.	7830000				Client:	Freeport-McMc	oRan Sierrita Ind	.
ask No.	6.2				Date:	1-8-	<u>05</u>	
Vell ID:	<u>Dup</u>	-070	808(CW-7	Weather:	Cloud	ely	
DWR No.	50	2546	,		Collected By:	M. Ar	heson	
				\w/=1	DATA			
		4	_	W.=J=1	DATA	7-1		
Vell Depth (ft bl	s):	1065			Time:	[2:5]	2	
Casing Diameter	r (in):				Point of Measure	ement:	<u> 70c </u>	
itatic Water Lev	vel (ft bmp):	<u> 424</u>	.40	,	GPS:	Seel	10	
Casing Volum	e (gals):	66	49		Elevation:	See -	. <i>le</i>	
3 Casing Volum	es (gals):	199	47					
			-	IEI D SAM	IPLING DATA			
Time	Discharge Rate	Total Discharge	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
THE STREET OF TH	(gpm)	(gallons)			(ролоні)			
4.200								
				SAMPLET	NFORMATION			
Sam	pie ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
Dup-n	70809	1320	Plastic	250 ml	1	EPA 300.0	None	Filtered
	070809		Plastic	250 ml	1	EPA 300.0	None	Unfiltered
		(0)	lecte	i.	CW-	CONTRACTOR OF THE PARTY OF THE		
Additional Con	mnents:		,	<u>~ ~ , </u>		1		
····			121		1			



Project No.	7830000				Client:	Freeport-McM	oRan Sierrita In	c.
Task No.	6.2				Date:	<u>7-8-(</u>	<u> 98</u>	
Well ID:	FB)	FQB	(Cu	1-7/	Weather:	Cloud	dy	
ADWR No.	<u></u>	2546			Collected By:	M.A.	rneson	
priise e viine treverile e et								
				WEL	DATA			
Well Depth (ft bi	s):	NA			Time:	/32/	/ .0	
Casing Diameter	r (in):	NA			Point of Measure	ement:	NH	
Static Water Lev	vel (ft bmp):	NA			GPS:		<u> </u>	
1 Casing Volum	e (gals):	NA			Elevation:	NA	2	
3 Casing Volum					·			
		watabij kastalaya sastana						
			- I	IELD SAN	IPLING DATA			
Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment
				SAMPLE II	NFORMATION			
Samp	ole ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
EQB-	070909	1320	Plastic	250 ml	1	EPA 300.0	None	Filtered
FB-C	70808	1320	Plastic	250 ml	1	EPA 300.0	None	Unfiltered
Additional Com		<u> </u>	leuted	at	(W-7	7		
		QA	100	Sum	ple			
			/			-		



	7830000				Client:	-reeport-ivicivit	oRan Sierrita	IIIC.
Task No.	6.2			1	Date:	7-8-C	8	
Well ID:	CW	-8			Weather:	Cloud	4	
ADWR No.	<u>CW</u> 5436	600			Collected By:	m. Ar	neson	
				WELL	DATA			
Well Depth (ft bis):	1200)`		Time:	17:0	0	and the state of t
Casing Diameter	(in):	24) •		Point of Measure	ement:	100	
Static Water Leve	el (ft bmp):	341.	75		GPS:	See 1	ile	remanda de la constanta de la
1 Casing Volume		201	87	·	Elevation:	See	Rile_	CLE CLEAR MARKET
3 Casing Volume	s (gals):	605	61	32min				
					D WC DATA			
				HELD SAW	PLING 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	1/27	Clear	St yes	Primponey 12:00
1207	11	13300	7.37	30.4	1198	11	11	
12/1	11	20,900	7.35	30,3	1260	1 ('(
1215	N	28500	7.37	29.9	1307	11	No	
1720	И	38000	7.37	30.0	1339	11	4)	
1225	71	47500	7.36	29.9		11	'1	
1730	7]	57000	7.40	29.8	1373	71	1	
		1 .				Ω		
	1		S(na)	tre O	10 L 1	Oge	2	
	1 Dt		SCHWI	Je-				
			2	SAMPLEI	NFORMATION			
Samp	ie 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	17:33	Plastic	250 ml	1	EPA 300.0	None	Unfiltered
Additional Comr	ments:	This o	well h	us not	been re	in Since	20	
, indicated worth								



Project No.	7830000				Client:	Freeport-McM		Inc.
Task No.	6.2				Date:	7-8-0		·
Well ID:	- CU	J-9			Weather:	Clear		
Carlos Ca	54	8121	ngg gagan an digitaliyyang a manapanan anasawa a tab bisme		Collected By:	m. A	rneson	
ADWR No.		10121			Concolod By.	1 1 1 1 1	///	
				WELL	DATA			
Weil Depth (ft bi	s):	100	0`		Time:	10:5	7	
Casing Diameter	r (in):	20)"		Point of Measur	ement:	TUC	
Static Water Lev		315	.60		GPS:	See Pi	10	
1 Casing Volume		111	79		Elevation:	See Fi	le	
		773	538					an en annatura de la companya de la companya de la companya de la companya de la companya de la companya de la
3 Casing Volum	es (gais):	<u> </u>						
			F	IELD SAM	PLING 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	Pumpon 10:59
1108	11	9000	7.14	28.0	389	l t	lι	
1112	11	13,000	7.25	28.0	394	1 (1.0	
1116	Ll	17,000	7.24	27.9	394	10		
1120	E *	21,000	7.21	27.9	391	11	()	
1124	11	25,000	7.22	27.9	393	11	/1	
1128	1.0	29,000	1.18	26.1	394	l c	11	
1132	11	33,000	7.76	27.9	396			
	+-				(2010)	1		
	10	fal 1),	charg	< 50	7000	591		
			Ą	SAMPLEII	NFORMATION			
Samp	ole ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
(w-9	F	11:35	Plastic	250 ml	1	EPA 300.0	None	Filtered
(w-9	7	11:35	Plastic	250 ml	1	EPA 300.0	None	Unfiltered
Additional Com	ments:	Thic,	vell in	vas cof	f for ap	Drox 8-	9 hrs pi	nor to
	I measu					Annual Control of Cont		
	, re-casu							



roject No.	7830000				Client: <u>F</u>	reeport-McMo		inc.
ask No.	6.2				Date:	7-8-09	5	
Veil ID:	CW	1-10			Weather: _	Cloudy		and the section of th
DWR No.		7982			Collected By:	M. Arne		
DVV NO.					-			
				WELL	DATA			
		1140) ¹		Time:	8:55		
V ell Depth (ft bis	s):	<u> </u>	/		-		TOC	
Casing Diameter	(in):	$\frac{16}{200}$	~ =		Point of Measure	See Sil	100	
Static Water Lev	el (ft bmp):	203.	25		GPS:	see >-1	9	
1 Casing Volume	e (gals):	979	34		Elevation:	See Fil	<u> </u>	
3 Casing Volume	es (gals):	2935	,2	ZOM.W			<u></u>	
		200 27 20 20 20 20 20 20 20 20 20 20 20 20 20			IDU IN CEDATA			
				HELD SAW	IPLING 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	Pumpon of 9:24
9:30	11	9000	7.15	30.7	367	t e	4	
9:34	11	15000	7.27	31./	376	6.	*	
9:38	10	21000	7.31	31.0	380	J c	10	
9:42	l c	27000	7.34	3/.2	345	10	1,	
9:45	. ((3/500	7.34	31.2	573		- 1	
			4					
		1010	Die	charge	1234	500 51	st /	
				SAMPLEI	NFORMATION			
Sam	pie ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
CW-1	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 Con	nments'	This	well s	hut o	sf this	Mornind	at 5!	30
Additional Con	milents.	<u> </u>	- ,, ,			3		



Project No.	7830000				Client:	Freeport-McM	oRan Sierrita	Inc.
Task No.	6.2				Date:	7-7-0	8	·
Vell ID:	GV-	01-61	1DW	$\mathcal{I}\mathcal{D}$	Weather:	Clear		
ADWR No.	603	3428			Collected By:	M. A.	Ineson	
				WELL	DATA			
Well Depth (ft bis)		64	15	van di aktawa ti ili a kwa	Time:	8:23		
Casing Diameter (•	16	<u>``</u>		Point of Measure	ment.	TOC	
	•	231.0	7) (1)			See File		
Static Water Leve		<u> </u>	7/1				,	HAVE THE RESERVE THE PROPERTY OF THE PROPERTY
1 Casing Volume	(gals):		227		Elevation:	See Ril		
3 Casing Volumes	s (gals):	120	112	12 min			goldogranden en gran en en en en en en en en en en en en en	
				FIELD SAN	IPLING 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		Clear	No	Pumparet 8:3
0 835	l c	2800	7.04	26.2	456	1.	1 .	
0838	1 (4900	7.13	26.2	458	1 <	11	
0841	11	6000	7.15	26.1	465	1 (11	
0844	1(8100	7.23	76.0	466			
0847		10,200	7.17	26.0	466			
0851	11	12,300	1.17	26.1	466			
		otal 6	7:50	wye	15,40	10 ga/		
					gapen Andrian proper language			
				SAMPLE IN	NFORMATION			
Sample	e ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment
GV-01-GV	DWID-F	0853	Plastic	250 ml	1	EPA 300.0	None	Filtered
6V-01-6V	DWID	0853	Plastic	250 ml	1	EPA 300.0	None	Unfiltered
Additional Comm	ents:	This	vell in	uas 354	f For app	ox 16 hr	s prior	40
							the second second	



Project No. 7830000					Client: Freeport-McMoRan Sierrita Inc.				
Task No.	6.2				Date: 7-7-08				
Well ID:	602112 <i>a</i>				Weather: (/ea/ Collected By: M. Arneson				
ADWR No.									
MDANK MO.	<u> </u>				· -	<u> </u>			
				WELL	DATA				
Well Depth (ft bis): 560'					Time:	9:15			
Casing Diameter		16) (Point of Measure	ement:	TUC		
	_		9 <i>5</i>		GPS:	See F	ile		
Static Water Level (ft bmp):		3749.6			Z00 1.1				
1 Casing Volume (gals):		1100			Elevation: OFE F. 18				
3 Casing Volume	es (gals):	112		16min					
			E	IELD SAM	IPLING DATA				
Time	Discharge Rate	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment	
0926	(gpm) 730	1460	6.96	24.9	641	Clear	No	Pumpon 9:24	
0929	36500	3650	6.96	24.1	640	11:	11	,	
0931	730	5840	7.08	२३. १	640	11	11		
0934	11	7300	7.11	73.9	640	1,-			
0937	11	9490	7.14	23.9	642	11	11		
0939	/:	10950	7,12	53.8	642	,,	1,		
		Total	17:30	hayo	12,4	110 99	/		
		70,00		0 -	·				
				SAMPLEI	NFORMATION				
Sample ID		Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comment	
GV-02-GNDWID-F		9:41	Plastic	250 ml	1	EPA 300.0	None	Filtered	
GV-02-6 VDWID		9:41	Plastic	250 ml	1	EPA 300.0	None	Unfiltered	
Additional Com	ments.	This	well	wus	off for c	upprox 1	7 hrs pr	for to	
		<u></u>	I Som	mali na	off for c				
- rea	suring	ul an	w son	17.79					



Project No. 7830000					Client: Freeport-McMoRan Sierrita Inc.					
ask No.	6.2 GV-SI-GVDWID Z08825				Date:	7-7-08 Cloudy M. Aineson				
Vell ID:					Weather:					
ADWR No. 208825					Collected By:	M. Ain	Aineson			
	Charles and Charle									
	langii Sahallan liikaa seniussip									
				WEL	LDATA L	1010				
Well Depth (ft bis): 650					Time:					
Casing Diameter (in):					Point of Measurement:					
tatic Water Lev	el (ft bmp):	NA			GPS: See File Elevation: See File					
1 Casing Volume (gals):					Elevation:	Elevation: See File				
Casing Volume										
	. (0						ask production and the contract of the contrac			
			Ē	IELD SAN	IPLING DATA					
Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment		
10:15	600	Continuers	7.20	27.8	382	Clear	No			
10:18	11	1.	7.19	27.5	379	11	11			
10:21	11	1,	7.20	27.2	380		17			
10:26	1.	/:	7.18	27.2	<u> </u>	7 (1,			
				Autoria prantina di Autoria						
				SAMPLEI	NFORMATION					
					No. of	Analysis	Preservative	Comment		
Samp	ole ID	Time	Container Type	Volume	Containers	Method	1 163C/Valive			
			Туре	Volume 250 ml	1	1	None	Filtered		
5V-SI-G	VDWID-	F 10:30	Type Plastic	250 ml	Containers	Method		Filtered Unfiltered		
5V-SI-G	VDWID VDWID	F 10:30	Plastic Plastic	250 ml	Containers	EPA 300.0 EPA 300.0	None	Unfiltered		



Project No.	7830000	SOUTH STATE OF THE			Client:	Freeport-McM	oRan Sierrita	inc.		
Task No.	6.2				Date:	<u> 7-7-</u>	08			
Well ID:	HAVEN GOLF				Weather:	(loud	·l _y			
ADWR No.					Collected By:	M. Arneson				
					PROPERTY OF THE PROPERTY OF TH					
				WELL	DATA					
		5/2))			13:10				
Well Depth (ft bis): _	<u> </u>	11		1/1					
Casing Diameter	(in): _	41.6			Point of Measure	ement:		i		
Static Water Leve	el (ft bmp):	NA			GPS:	3PS: <u>Jee 1.18</u>				
1 Casing Volume	(gals):	NA_			Elevation:	See !	-i/e			
3 Casing Volume	s (gals):									
			E	IEUD SAM	PLING DATA					
Time	Discharge Rate	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Comment		
1315	(gpm) 800	(ganons)	6-79	25.7	754	Clear	No	Pumponer 1314		
1318	1	mple po		ina air						
1326	800	9600	6.91	25.8	753	11	//	-		
1330	800	12,800	6.91	24.0	736	1:	11			
/333	800	15,200	6.93	23.9	727	ą c	11			
							·			
	Te	Ha I) < class	and -	16.8	00				
		14 (150Vleu	9-	, , ,					
				SAMPLEIN	NFORMATION		T			
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 Com	ments:	This	vell wa	s hot r	unmag or	arrival.	I can	not mesure		
ı	1 Here	•	bstruck		")					
	<i>/ /</i>	, June	20,140	<u></u>						



HYDRO GEO CHEM, INC. Groundwater Sampling Form

Project No.	7830000	2,2,2,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4			Client:	Freeport-McM	oRan Sierrita	Inc.	
Task No.	6.2				Date:	F-U-	08	,	
Well ID:	NP-2			Weather:	Mostly	Sunny-	Verys	hicky	
ADWR No.	60	5898			Collected By:	Mostly Sunny - Verysticky			7
					,			general company and consistency consistency (Art Child Consistency Child	
				WELI	_DATA				
Well Depth (ft bis): 515			Time:	12:21) 				
Casing Diameter	(in):	12	10		Point of Measur	ement:	TOC		
Static Water Lev		255	10		GPS:	onti	10.		
Ì		9110	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		gg				
1 Casing Volume		282	<u>'</u>		Elevation:	ont	112		
3 Casing Volume	es (gals):	<u> </u>							
				IELD SAN	IPLING DATA				
Time	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Color	Odor	Com	ment
1234	90	180	7.03	25.6	459	Clear	No	Pumpan	12:32
	9060	630	787	25.4	456	11	V		
1244	7,5	1085	7.77	25.6	459	R	n		
1249	75	1880	7.75	17	456	16	п		
1254	15	1755	7.75	25.7	458	, (n		
1259	75	2130	7.69	25.7	457	باز ا	Pl		
1304	60	2430	7.64	25.9	457	Ci Ci	by .		
1310	60	2820	7.62	25.9	455	FC	17		
			\$	SAMPLEI	NFORMATION				
Samp	le ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Com	ment
NPZ	F	(3:15	Plastic	250 ml	1	EPA 300.0	None	Filte	ered
NPZ		13:15	Plastic	250 ml	1	EPA 300.0	None	Unfil	Itered
Additional Com	ments:								
							**\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
					,				



HYDRO GEO CHEM, INC. Groundwater Sampling Form

Project No.	7830000				Client:	Freeport-McMc	oRan Sierrita I	nc.
Task No.	6.2				Date:	7-9-	09	Na James Care de la Ca
- Well ID:		1m-1			Weather:	Cloue	ly	
•		5156	110 p. (110 p.		Collected By:	m. A	rneson	
ADWR No.		<u> </u>			oonsoled by:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	V.L.P.
				WELL	- DATA			
Well Depth (ft bis): _	<u> 500</u>	<u>), </u>		Time:	9:3	0	
Casing Diameter	(in):	10'	1		Point of Measur	ement:	700	
Static Water Leve	el (ft bmp):	4:	37.3	7	GPS:	<u>See</u>	tile	
1 Casing Volume	(gals):	2	55		Elevation:	<u>See</u>	Sile.	
3 Casing Volume	•	76	56.6					
A Charles Made on L. C. and The Control of Land and								
				IELU SAN	IPLING DATA Specific			
Time	Discharge Rate	Total Discharge	pH (SU)	Temp (°C)	Conductance (µS/cm)	Color	Odor	Comment
9.54	(gpm)	(gallons)	7.69	25.7	323	Clear	No	Pump en a 953
9:56	6	18	8.06	24.7	279	16	11	,
9:58	6	30	8.11	24.7	306	11		
10:00	6	42	8.19	25.0	309	11	1 1	
10:02	Flow	dropped	< 1 9p	m 14	low Rea	very		
10:46	6	60	8.07	28,0	300	W	1,	
10:47	6	66	7,74	223	296	11	11	
	1 T	117	2-1		77000	1		
4 1 2 4	104	W/ //	30 hu.	19e 1	(Lga)			
				SAMPLEI	NFORMATION			
Samp	le 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								
	Ú.	Morred	to rea	cherce	for 40	5 mm		·
				0	•			



APPENDIX D

TIME SERIES GRAPHS OF SULFATE CONCENTRATION AND GROUNDWATER ELEVATION

TABLE OF CONTENTS

TABLE

D.1 Sulfate Concentration and Groundwater Elevation Data

FIGURES

- D.1 Sulfate Concentration and Groundwater Elevation Over Time for Wells CW-6, CW-7, CW-8, and CW-9
- D.2 Sulfate Concentration and Groundwater Elevation Over Time for Wells CW-10, GV-1-GVDWID, GV-2-GVDWID, and GV-SI-GVDWID
- D.3 Sulfate Concentration and Groundwater Elevation Over Time for Wells ESP-1, ESP-2, ESP-3, and ESP-4
- D.4 Sulfate Concentration and Groundwater Elevation Over Time for Wells MO-2007-1A, MO-2007-1B, MO-2007-1C, and MO-2007-2
- D.5 Sulfate Concentration and Groundwater Elevation Over Time for Wells NP-2, MO-2007-3B, MO-2007-3C, and MO-2007-4A
- D.6 Sulfate Concentration and Groundwater Elevation Over Time for Wells MO-2007-4B, MO-2007-4C, CW-3, and MO-2007-5B
- D.7 Sulfate Concentration and Groundwater Elevation Over Time for Wells MO-2007-5C, MO-2007-6A, and MO-2007-6B
- D.8 Sulfate Concentration and Groundwater Elevation Over Time for Wells MH-28 and MH-29

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 CW-7	01/03/07 05/14/07	2562.50 2563.35	807 874
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 CW-10	04/15/08 07/08/08	2680.55 2665.25	50.8 50.5
	07/00/00	2003.23	
GV-1-GVDWID	08/06/06	NM	41.2
GV-1-GVDWID	01/09/07	2721.35	40.9
GV-1-GVDWID GV-1-GVDWID	04/10/07	2724.49 2711.35	43.2 41.5
GV-1-GVDWID	07/11/07 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 GV-SI GVDWID	04/16/08 08/14/08	2795.10 2797.15	2 <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

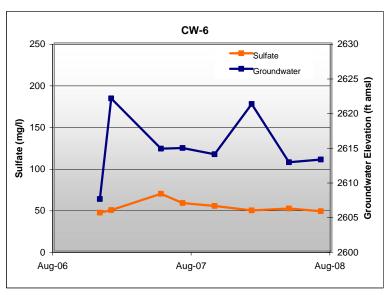
ESP-2	Well ID	Date	Groundwater Elevation (ft amsl)	Sulfate (mg/L)
ESP-2 01/03/07 2580.51 31.3 ESP-2 05/14/07 2583.71 28.4 ESP-2 07/10/07 2593.35 28.6 ESP-2 10/12/07 2592.34 30 ESP-2 01/23/08 2594.20 30 ESP-2 01/23/08 2593.67 27.6 ESP-2 07/25/08 2593.67 27.6 ESP-3 07/25/08 2593.67 27.6 ESP-3 01/30/07 2573.59 37.5 ESP-3 01/30/07 2575.59 37.5 ESP-3 01/30/08 NM 30.6 ESP-3 01/30/08 NM 30.7 ESP-4 01/30/08 NM 35.7 ESP-4 05/44/07 2560.61 38.6 ESP-4 05/44/07 2606.19 360.62 ESP-4 01/23/08 2608.21 451 ESP-4 01/30/08 2608.31 360 ESP-4 01/30/09	ECD 2	12/04/06	` ,	
ESP-2 05/14/07 2593.35 28.6 ESP-2 07/10/07 2593.35 28.6 ESP-2 07/12/07 2593.35 28.6 ESP-2 07/12/07 2593.35 28.6 ESP-2 07/12/08 2593.35 28.6 259-2 07/12/08 2593.36 259.2 30 26.8 259.2 27.6 30 259.2 27.6 30 259.2 27.6 30 259.2 27.6 30 259.2 27.6 30 259.2 27.6 30 259.2 27.6 30 259.2 27.6 30 27.5 30 27.5 30 30 27.5 30 30 27.5 30 30 27.5 30 30 27.5 30 30 27.5 30 30 27.5 30 30 30 259.3 30 30 259.3 30 30 30 30 30 30 30	_			
ESP-2				
ESP-2				
ESP-2 O1/23/08				
ESP-2		10/12/07	2592.34	= =
ESP-3 ESP-4 ESP-3 ESP-4 ESP-3 ESP-4 ESP-3 ESP-4 ESP-3 ESP-4	ESP-2	01/23/08	2594.20	30
ESP-3	ESP-2	04/18/08	2593.67	27.6
ESP-3 01/03/07 2578.59 37.5 ESP-3 05/14/07 2578.34 36.6 ESP-3 07/10/07 2577.75 36.6 ESP-3 10/12/07 NM 40 40 ESP-3 01/23/08 NM 30 ESP-3 01/23/08 NM 30 ESP-3 04/18/08 NM 35.7 ESP-3 04/18/08 NM 34 ESP-3 04/18/08 NM 34 ESP-4 05/24/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.09 80 410 ESP-4 07/10/07 2606.09 80 410 ESP-4 07/10/07 2606.09 80 410 ESP-4 07/25/08 2606.19 300 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.47 420 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 450 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2606.27 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.25 56 ESP-4 07/25/08	ESP-2	07/25/08	2592.30	26.8
ESP-3 01/03/07 2578.59 37.5 ESP-3 05/14/07 2578.34 36.6 ESP-3 07/10/07 2577.75 36.6 ESP-3 10/12/07 NM 40 40 ESP-3 01/23/08 NM 30 ESP-3 01/23/08 NM 30 ESP-3 04/18/08 NM 35.7 ESP-3 04/18/08 NM 34 ESP-3 04/18/08 NM 34 ESP-4 05/24/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.09 80 410 ESP-4 07/10/07 2606.09 80 410 ESP-4 07/10/07 2606.09 80 410 ESP-4 07/25/08 2606.19 300 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.47 420 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.21 451 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 450 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2606.27 420 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2606.27 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.23 56 ESP-4 07/25/08 2557.25 56 ESP-4 07/25/08				
ESP-3 06/14/07 2576.34 36.6 ESP-3 07/10/07 2577.75 36.6 ESP-3 10/12/07 NM 40 ESP-3 10/12/07 NM 30 SESP-3 07/12/08 NM 30.0 ESP-3 04/18/08 NM 35.7 ESP-3 04/18/08 NM 35.7 ESP-3 04/18/08 NM 34.0 ESP-3 07/12/08 NM 34.0 ESP-3 07/12/08 NM 34.0 ESP-4 05/14/07 2606.71 385 ESP-4 05/14/07 2606.71 385 ESP-4 ESP-4 07/10/07 2606.871 385 ESP-4 ESP-4 07/10/07 2606.19 360 ESP-4 10/12/07 2606.19 360 ESP-4 07/12/08 2606.19 360 ESP-4 07/12/08 2606.19 360 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2606.21 451 ESP-4 05/18/08 2654 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 2655 ESP-4 05/18/08 26			-	
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 30 ESP-3 04/18/08 NM 34 ESP-4 03/20/07 2606.02 393 ESP-4 05/14/07 2606.02 393 ESP-4 05/14/07 2606.19 360 ESP-4 07/10/07 2606.19 360 ESP-4 07/10/07 2606.19 360 ESP-4 07/10/07 2606.19 360 ESP-4 07/10/07 2606.19 360 ESP-4 01/23/08 2606.19 360 ESP-4 01/23/08 2606.19 360 ESP-4 01/23/08 2606.19 360 ESP-4 01/23/08 2606.19 360 ESP-4 01/23/08 2606.17 420 ESP-4 07/25/08 2606.47 420 MO-2007-1A 08/08/07 2541.28 19.2 MO-2007-1A 01/24/08 2541.33 20 MO-2007-1A 01/24/08 2541.33 20 MO-2007-1A 01/24/08 2541.33 20 MO-2007-1A 01/24/08 2541.33 20 MO-2007-1A 01/24/08 2541.33 20 MO-2007-1B 08/02/07 2540.68 18.9 MO-2007-1B 08/02/07 2540.68 18.9 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1B 01/24/08 2540.41 30 MO-2007-1C 07/34/08 2553.78 39.8 MO-2007-1C 07/34/08 2553.78 4 39.8 MO-2007-1C 07/34/08 2553.78 4 39.8 MO-2007-1C 07/34/08 2544.58 140 MO-2007-1C 07/34/08 2544.58 140 MO-2007-1C 07/34/08 2544.58 140 MO-2007-1C 07/44/08 2544.58 140 MO-2007-1C 07/44/08 2544.58 140 MO-2007-1C 07/44/08 2545.28 149 MO-2007-1C 07/44/08 2545.28 149 MO-2007-2 06/14/07 2578.59 591 MO-2007-2 06/14/07 2578.59 591 MO-2007-2 06/14/07 2578.59 591 MO-2007-2 06/14/08 2544.58 140 MO-2007-2 06/14/08 2545.28 149 MO-2007-2 06/14/08 2555.05 41.7 NP-2 08/30/07 2556.05 40.00 MO-2007-3 04/17/08 2555.48 41.2 NP-2 06/04/07 2556.44 37.8 MO-2007-3 04/17/08 2555.48 41.2 NP-2 06/04/07 2556.44 37.8 MO-2007-3 04/17/08 2555.46 40.5 MO-2007-3 04/17/08 2555.06 41.7 NP-2 06/04/07 2556.44 37.8 MO-2007-3 04/14/08 2556.44 37.8 MO-2007-3 04/14/08 2556.44 37.8 MO-2007-3 04/14/08 2556.44 37.8 MO-2007-3 04/14/08 2556.44 37.8 MO-2007-3 04/14/08 2556.44 37.8 MO-2007-3 04/14/08 2556.44 37.8 MO-2007				
ESP-3 01/23/08 NM 30 ESP-3 04/18/08 NM 30, S5.7 ESP-3 04/18/08 NM 30, S5.7 ESP-3 04/18/08 NM 34, S5.7 ESP-3 04/18/08 NM 34, S5.7 ESP-4 05/14/07 2608.71 385 ESP-4 05/14/07 2608.71 385 ESP-4 05/14/07 2608.71 385 ESP-4 07/10/07 2608.80 410 ESP-4 10/12/07 2608.19 360 ESP-4 10/12/07 2608.19 360 ESP-4 01/12/08 2608.95 520 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2608.21 451 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 04/18/08 2541.33 20 ESP-4 ESP-4 04/18/08 2541.33 20 ESP-4 ESP-4 04/18/08 2541.33 20 ESP-4				
ESP-3 04/1808 NM 35.7 ESP-3 04/1808 NM 35.7 ESP-3 07/2508 NM 34 ESP-4 03/2007 2606.02 393 ESP-4 05/1407 2606.11 385 ESP-4 05/1407 2606.11 385 ESP-4 07/1007 2606.19 360 ESP-4 101/207 2606.19 360 ESP-4 01/2308 2606.95 520 ESP-4 04/1808 2606.21 451 ESP-4 07/2508 2606.47 420 MC-2007-1A 08/0807 2541.28 19.2 MC-2007-1A 101/2408 2606.47 420 MC-2007-1A 04/0908 2541.33 20 MC-2007-1A 04/0908 2541.33 20 MC-2007-1A 04/0908 2541.33 20 MC-2007-1B 08/02/07 2546.68 18.9 MC-2007-1B 08/02/07 2546.68 18.9 MC-2007-1B 04/0908 2541.77 33 MC-2007-1B 04/0908 2541.77 33 MC-2007-1B 04/0908 2541.77 33 MC-2007-1B 04/0908 2541.77 33 MC-2007-1B 04/0908 2541.77 33 MC-2007-1C 07/14/08 2537.84 39.8 MC-2007-1C 07/14/08 2537.84 39.8 MC-2007-1C 07/14/08 2537.84 39.8 MC-2007-1C 07/14/08 2537.84 39.8 MC-2007-1C 07/14/08 2537.84 39.8 MC-2007-1C 07/14/08 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-1C 04/0908 2541.85 165 MC-2007-2 08/14/07 2576.91 560 MC-2007-2 08/14/08 2551.86 44.7 MC-2007-2 08/14/08 2551.46 41.7 NP-2 08/13/07 2555.05 4				
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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-2007-3C	04/15/08	2554.72	127
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MO-2007-4B 04/16/08 2617.09 33.6				
	MO-2007-4B	07/18/08	2614.62	35.5

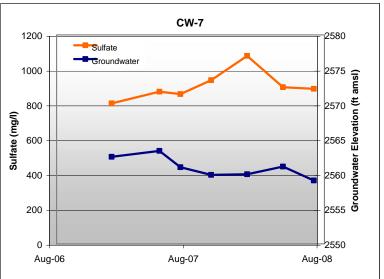
TABLE D.1
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION DATA

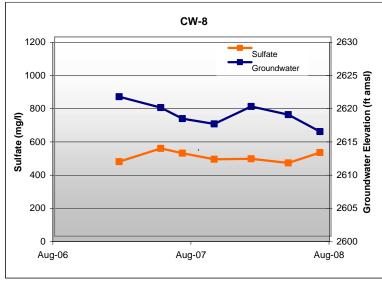
		Groundwater Elevation	Sulfate
Well ID	Date	(ft amsl)	(mg/L)
MO-2007-4C	08/16/07	2626.36	78.7
MO-2007-4C	10/12/07	2614.71	80.1
MO-2007-4C	01/22/08	2618.76	80
MO-2007-4C	04/16/08	2616.91	80
MO-2007-4C	07/18/08	2614.56	78.6
CW-3	06/06/07	2675.89	57.9
CW-3	08/10/07	2674.04	59.5
CW-3	11/06/07	2671.73	57.5
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 MO-2007-6B	04/17/08	2726.01	81.5
WO-2007-0D	07724/00	2720.01	01.5
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
		0=4	40
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







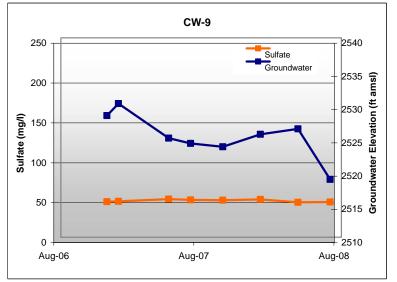
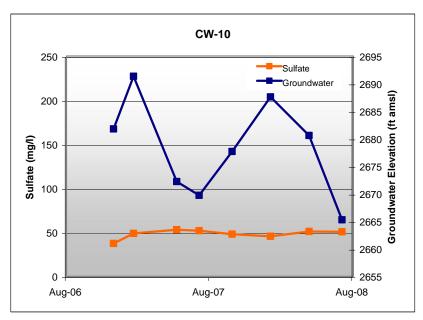
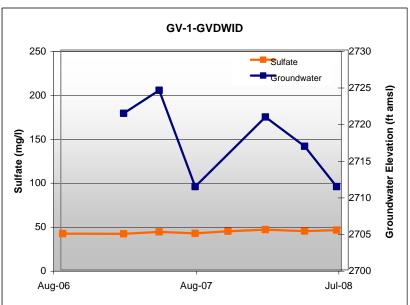
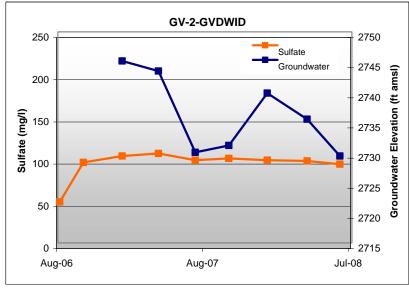


FIGURE D.2
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
CW-10, GV-1-GVDWID, GV-2-GVDWID, AND GV-SI-GVDWID







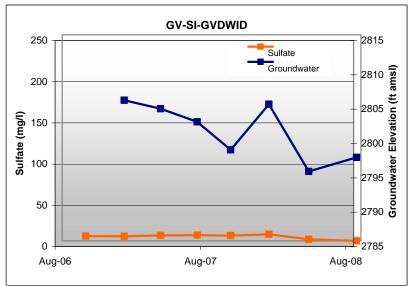
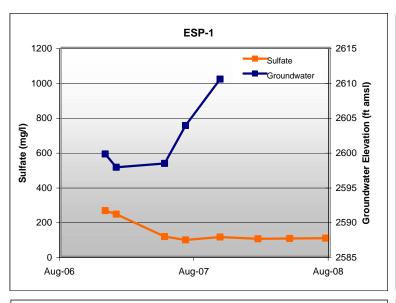
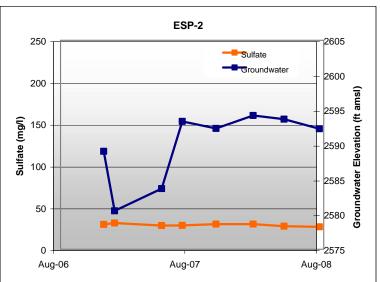
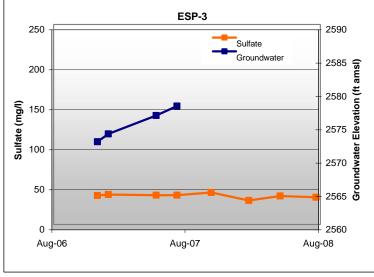


FIGURE D.3
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
ESP-1, ESP-2, ESP-3, AND ESP-4







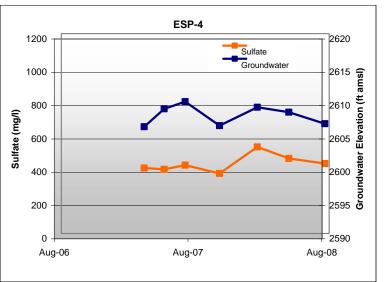
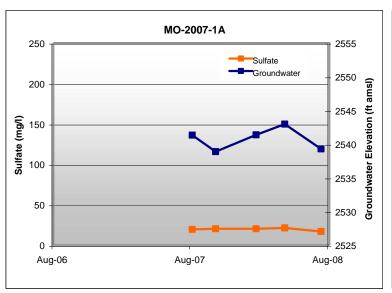
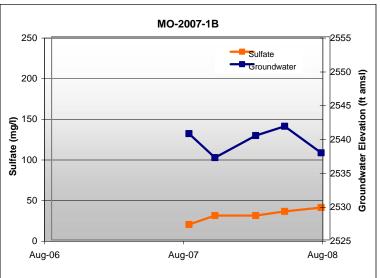
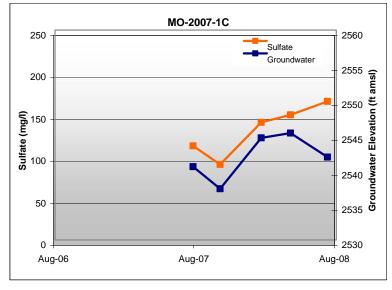


FIGURE D.4
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, MO-2007-1C, AND MO-2007-2







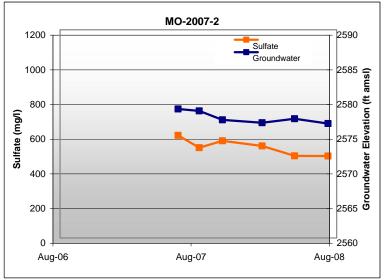
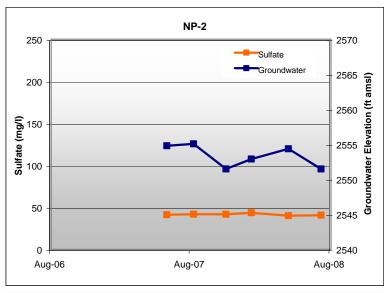
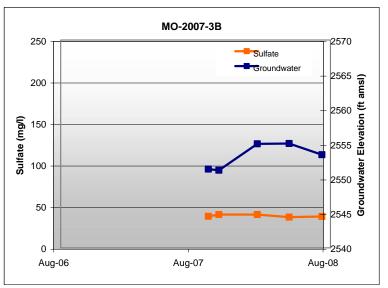
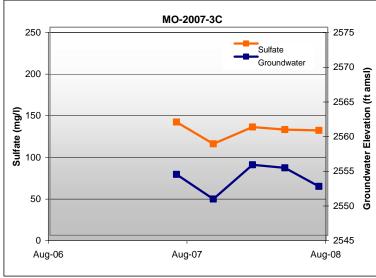


FIGURE D.5
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND MO-2007-4A







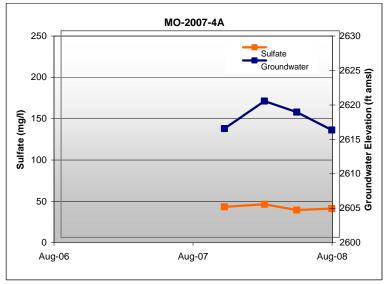
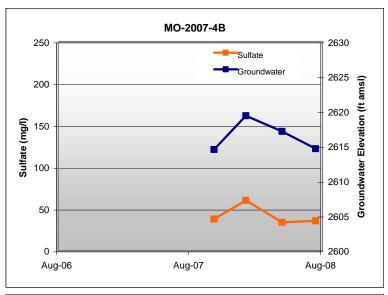
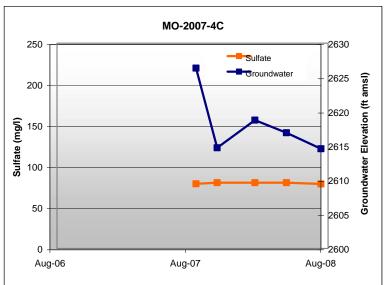
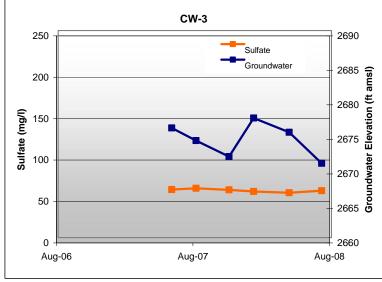


FIGURE D.6
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MO-2007-4B, MO-2007-4C, CW-3, AND MO-2007-5B







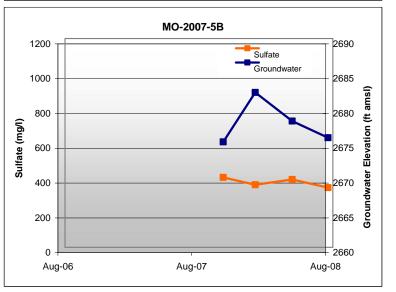
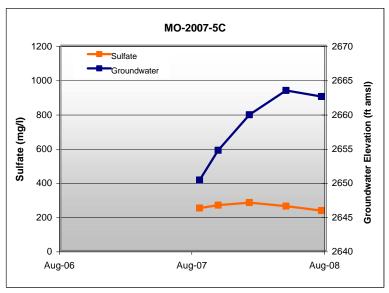
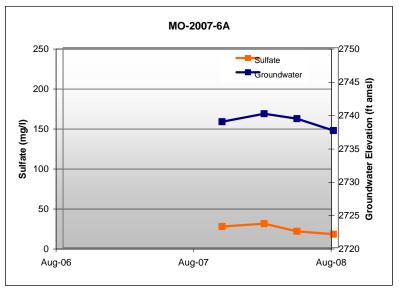


FIGURE D.7
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MO-2007-5C, MO-2007-6A, AND MO-2007-6B





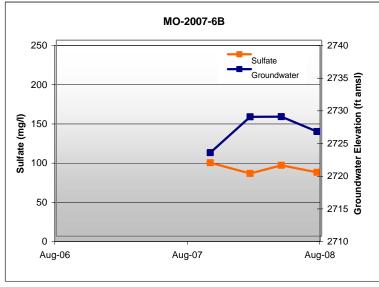


FIGURE D.8
SULFATE CONCENTRATION AND GROUNDWATER ELEVATION OVER TIME FOR WELLS
MH-28 AND MH-29

