FOURTH QUARTER 2009
GROUNDWATER MONITORING REPORT

TASKS 1.0 AND 2.2 OF AQUIFER CHARACTERIZATION PLAN
MITIGATION ORDER ON CONSENT DOCKET NO. P-121-07
COCHISE COUNTY, ARIZONA

Prepared for:

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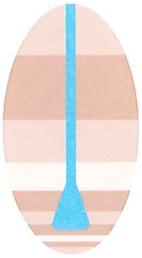
January 8, 2010



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Environmental Science & Technology

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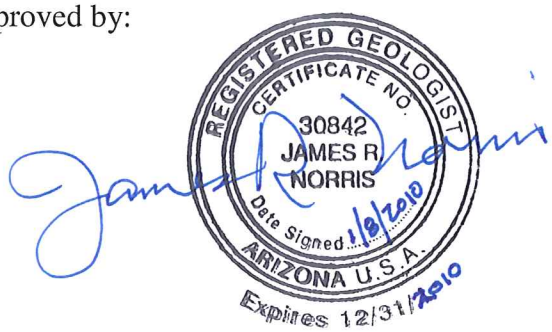

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January 8, 2010

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1. INTRODUCTION

This report was prepared for Freeport-McMoRan Copper Queen Branch (CQB), and provides the results of groundwater monitoring conducted in the fourth quarter of 2009 in the vicinity of the Concentrator Tailing Storage Area (CTSA). Groundwater monitoring was conducted by CQB pursuant to Tasks 1.0 and 2.2 of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2008a) to characterize sulfate in the vicinity of the CTSA. The Work Plan was initially submitted to Arizona Department of Environmental Quality (ADEQ) on December 17, 2007 pursuant to the Mitigation Order on Consent Docket No. P-121-07 (ADEQ, 2007). CQB initiated water sampling prior to work plan approval while ADEQ was commenting on the Work Plan and CQB was responding to their comments. Revision 1 of the Work Plan was submitted to ADEQ on July 3, 2008 and ADEQ approved the Work Plan on August 3, 2008. HGC and Clear Creek Associates prepared this groundwater monitoring report on behalf of CQB.

1.1 Scope of Groundwater Monitoring

The scope of the groundwater monitoring program is described in Sections 3.2, 3.3.2 and 3.3.3 of the Work Plan (HGC, 2008a). This report presents the results of groundwater monitoring conducted in the fourth quarter of 2009 for Tasks 1.0 and 2.2 of the Work Plan. Task 1.0 consisted of a well inventory to identify and sample private drinking water supply wells and public water supply system wells within one mile of the sulfate plume (HGC, 2008b). The groundwater plume is considered to consist of groundwater with sulfate in excess of 250 milligrams per liter (mg/L) attributable to the CTSA. The drinking water supplies within a mile of the plume are sampled quarterly or monthly for sulfate trend analysis as described in Section 4 of the Work Plan. Groundwater monitoring for Task 2.2 consisted of water elevation measurement and collection of groundwater samples from wells in the vicinity of the CTSA. Figure 1 presents a generalized geologic map of the study area and well locations where data were collected during this reporting period.

The Work Plan identifies two purposes for the groundwater monitoring program required in Task 2.2; plume monitoring and regional monitoring. Plume monitoring is conducted quarterly at wells that are proximal to the sulfate plume in order to track the plume's location in the aquifer. Regional monitoring to characterize hydrologic conditions outside the area of the sulfate plume was completed in the third quarter of 2008 (HGC, 2008c). This report presents the results of well inventory and plume monitoring conducted during the fourth quarter of 2009. Pursuant to the Work Plan, the only constituent of interest for monitoring is sulfate.

Table 1 lists wells identified for monitoring by the well inventory and the Work Plan, their availability for sampling in the fourth quarter of 2009, and their sampling status. Groundwater sampling and analysis methods used by HGC are described in the Quality Assurance Project Plan (QAPP) contained in Appendix F of the Work Plan (HGC, 2008a). Results of groundwater monitoring for Tasks 1.0 and 2.2 are presented in Section 2.

On November 12, 2009, a measuring point elevation survey was completed by Arizona Land Specialists, Inc. (ALS) for Naco Sanitary District wells NSD-02 and NSD-03 and one private well ROGERS 596. A copy of the survey report completed by ALS is included as Appendix A.1.

2. GROUNDWATER MONITORING RESULTS

2.1 Results of Monitoring for Tasks 1.0 and 2.2

Analytical results and groundwater elevation data for the fourth quarter of 2009 are tabulated in Table 2 and Table 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the fourth quarter of 2009. The most recent sample results are shown at wells where multiple samples were collected during the quarter. The highest sulfate concentration measured at co-located wells was used for concentration contouring. Figure 3 shows groundwater elevations in the fourth quarter of 2009. Groundwater elevations were calculated using the depth to water measurements made under static (nonpumping) conditions for all wells shown.

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 and analytical laboratory reports for data collected by HGC during the fourth quarter of 2009 are included in Appendix B and Appendix C, respectively. Copies of groundwater sampling forms for samples collected by HGC are in Appendix D. As determined by the analytical data verification review, all data for samples collected in the fourth quarter of 2009 by HGC are of acceptable quality for use in the groundwater monitoring being conducted pursuant to the Mitigation Order.

3. FINDINGS

This report provides the results of groundwater monitoring conducted within the vicinity of the CTSA for the fourth quarter of 2009. Groundwater samples were collected from 79 plume monitoring and well inventory wells, and depth to water measurements were collected at 77 wells. The April 2009 Aquifer Characterization Report (HGC, 2009a) provides detailed descriptions of the hydrogeology, water quality, and sulfate plume. Findings based on the fourth quarter 2009 groundwater monitoring are described below.

- Water quality samples have been collected from wells completed in three principal water bearing units in the area: basin fill, undifferentiated Bisbee Group, and Glance Conglomerate. The undifferentiated Bisbee Group consists, from youngest to oldest, of the Cintura Formation, Upper Mural Limestone, Lower Mural Limestone and Morita Formation. Figures 2 and 3 provide the screened lithology of the wells sampled.
- Sulfate concentration data indicate that the plume extends to the southwest from the vicinity of the former evaporation pond to the vicinity of Naco and to the south to the vicinity of Bisbee Junction (Figure 2). The groundwater monitoring data indicate that the sulfate plume extends over an area of approximately 2.8 miles by 3.9 miles and is contained primarily in the basin fill and undifferentiated Bisbee Group except near the former evaporation pond where wells in the Glance Conglomerate have sulfate concentrations greater than 250 mg/L.
- Comparison of the fourth quarter 2009 sulfate concentrations with previous quarters indicates no significant large scale change in the plume geometry since the Mitigation Order sampling began in the first quarter 2008. A small scale change in the plume extent was observed at the leading edge of the plume west of Naco Highway and north of Greenbush Draw. Monitoring results in the fourth quarter 2009 indicate that the sulfate concentration increased over 250 mg/L in ROGERS 596. The 250 mg/L sulfate concentration contour for the fourth quarter 2009 depicted on Figure 2 was extended westward approximately 540 feet compared to the contour for the third quarter 2009 (HGC, 2009b) to account for the increased concentration at ROGERS 596. A 500 mg/L contour was placed around ROGERS 596 because sample concentrations exceeded 500 mg/L.
- Additional information obtained through interviews with David Rogers in October 2009 verified that the well previously reported as ROGERS 803 is actually well ROGERS 596. The wells were resurveyed and ROGERS 596 is about 40 feet north of ROGERS 803. In October 2009 ROGERS 596 contained sulfate at a concentration of 590 mg/l, while the third quarter 2009 sulfate concentration was reported at 150 mg/l. A confirmation sample collected on November 5, 2009, detected sulfate at a concentration of 540 mg/l.

- Groundwater elevations decrease from north to south east of the Black Gap fault in the region between the Bisbee Municipal Airport and Bisbee Junction, and from east to west across the central portion of the study area west of the Black Gap fault (Figure 3). Comparison of the fourth quarter 2009 water elevations with those observed in the third quarter 2009 (HGC, 2009b) indicates about a 1.49 foot increase in the average groundwater elevation and only minor differences in the apparent groundwater flow directions.
- Groundwater monitoring conducted during the fourth quarter 2009 is deemed to have met the objectives of monitoring drinking water supply wells within one mile of the plume, identifying the location of the plume, and providing potentiometric data in the vicinity of the plume.

4. REFERENCES

Arizona Department of Environmental Quality. 2007. Mitigation Order on Consent, Docket No. P-121-07, In the Matter of: Phelps Dodge Corporation, Copper Queen Branch, located at 36 West Highway 92, Bisbee, Arizona, ADEQ Identification Number 100531. November 14, 2007.

Hydro Geo Chem, Inc. (HGC). 2008a. Revision 1, Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Concentrator Tailing Storage Area, Cochise County, Arizona. July 3, 2008.

HGC. 2008b. Well Inventory Report, Task 1.0 of Aquifer Characterization Plan Mitigation Order on Consent No. P-121-07, Cochise County, Arizona. July 28, 2008.

HGC. 2008c. Third Quarter 2008, Groundwater Monitoring Report, Tasks 1.0, 2.2 and 2.3 of Aquifer Characterization Plan Mitigation Order on Consent No. P-121-07, Cochise County, Arizona. October 27, 2008.

HGC. 2009a. Aquifer Characterization Report, Task 4.0 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-121-07, Cochise County, Arizona, Volume I. April 29, 2009.

HGC. 2009b. Third Quarter 2009, Groundwater Monitoring Report, Tasks 1.0 and 2.2 of Aquifer Characterization Plan, Mitigation Order On Consent Docket No. P-121-07, Cochise County, Arizona. October 20, 2009.

TABLES

TABLE 1
Summary of Groundwater Monitoring Fourth Quarter 2009

Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet)	Water Level Measured?	Water Sample Collected?	Status
ANDERSON	613396	Anderson	Well Inventory	236	YES	YES	Water quality sample collected in October 2009
AWC-02	616586	Arizona Water Company	Plume	330	YES	YES	Water quality sample collected in October 2009
AWC-03	616585	Arizona Water Company	Plume	269	YES	YES	Water quality sample collected in October 2009
AWC-04	616584	Arizona Water Company	Plume	250	YES	YES	Water quality sample collected in October 2009
AWC-05	590620	Arizona Water Company	Plume	1183	YES	YES	Water quality sample collected in October 2009
BANKS 986	647986	Banks	Well Inventory	435	NO	YES	Water quality sample collected in October 2009; unable to collect water level due to obstruction
BANKS 987	647987	Banks	Well Inventory	339	YES	NO	Well identified for water level measurements only
BARTON 010	085010	Barton	Plume	300	NO	NO	Dry
BARTON 919	644919	Barton	Plume	130	NO	NO	Well not operational; unable to collect water level, owner could not be reached to access property
BF-01	539783	Copper Queen Branch	Plume	400	YES	YES	Water quality sample collected in November 2009
BIMA	577927	Bisbee Municipal Airport	Plume	465	YES	YES	Water quality sample collected in October 2009
BLOMMER	633472	Blommer	Well Inventory	380	NO	NO	Owner declined participation in monitoring program
BMO-2008-1G	909474	Copper Queen Branch	Plume	310	YES	YES	Water quality sample collected in October 2009
BMO-2008-3B	909147	Copper Queen Branch	Plume	260	YES	YES	Water quality sample collected in October 2009
BMO-2008-4B	910096	Copper Queen Branch	Plume	610	YES	YES	Water quality sample collected in October 2009
BMO-2008-5B	909653	Copper Queen Branch	Plume	285	YES	YES	Water quality sample collected in October 2009
BMO-2008-5M	909552	Copper Queen Branch	Plume	450	YES	YES	Water quality sample collected in October 2009
BMO-2008-6B	909146	Copper Queen Branch	Plume	265	YES	YES	Water quality sample collected in October 2009
BMO-2008-6M	909019	Copper Queen Branch	Plume	450	YES	YES	Water quality sample collected in October 2009
BMO-2008-7M	908794	Copper Queen Branch	Plume	670	YES	YES	Water quality sample collected in October 2009
BMO-2008-8B	910097	Copper Queen Branch	Plume	480	YES	YES	Water quality sample collected in November 2009
BMO-2008-8M	909711	Copper Queen Branch	Plume	1210	YES	YES	Water quality sample collected in November 2009
BMO-2008-9M	909255	Copper Queen Branch	Plume	775	YES	YES	Water quality sample collected in November 2009
BMO-2008-10GU	909272	Copper Queen Branch	Plume	449	YES	YES	Water quality sample collected in November 2009
BMO-2008-10GL	909435	Copper Queen Branch	Plume	810	YES	YES	Water quality sample collected in November 2009
BMO-2008-11G	909434	Copper Queen Branch	Plume	760	YES	YES	Water quality sample collected in November 2009
BMO-2008-13B	909551	Copper Queen Branch	Plume	474	YES	YES	Water quality sample collected in October 2009
BMO-2008-13M	909760	Copper Queen Branch	Plume	1030	YES	YES	Water quality sample collected in October 2009
BULLARD	602134	Bullard	Plume	300	NO	NO	Well not operational; unable to collect water level due to obstruction
BURKE	212268	Burke	Plume	781	NO	YES	Water quality sample collected in December 2009; unable to collect water level due to failure of 750 foot sounder

TABLE 1
Summary of Groundwater Monitoring Fourth Quarter 2009

Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet)	Water Level Measured?	Water Sample Collected?	Status
CHAMBERS	629807	Chambers	Well Inventory	245	NO	YES	Water quality sample collected in October 2009; no access to well casing for water level measurement
COB MW-1	903992	City of Bisbee	Plume	420	YES	YES	Water quality sample collected in October 2009
COB MW-2	903984	City of Bisbee	Plume	170	YES	YES	Water quality sample collected in October 2009
COB MW-3	906823	City of Bisbee	Plume	269	YES	YES	Water quality sample collected in October 2009
COB WL	593116	City of Bisbee	Plume	150	YES	YES	Water quality sample collected in October 2009
COLLINS[1]	565260	Collins	Well Inventory	320	YES	YES	Water quality sample collected in October 2009
COOPER	623564	Cooper, Teresa	Plume	325	NO	YES	Water quality sample collected in October 2009; unable to collect water level due to obstruction
COOPER C	637069	Cooper, Charles	Plume	220	YES	YES	Water quality sample collected in October 2009
CROWLEY	510298	Crowley	Plume	788	NO	NO	Dry
DODSON	644927	Dodson	Plume	200	YES	YES	Water quality sample collected in October 2009
DOUGLASS 791	592791	Douglass	Well Inventory	200	YES	NO	Well not operational; identified for water level measurements only
DOUGLASS 792	592792	Douglass	Well Inventory	200	YES	NO	Well not operational; identified for water level measurements only
DURAZO	NR	Durazo	Well Inventory	ND	NO	YES	Water quality sample collected in October 2009; no access to well casing for water level measurement
EAST	599796	East	Well Inventory	125	YES	YES	Water quality sample collected in October 2009
EPPELE 641	805641	Eppele	Well Inventory	265	YES	NO	Well not operational; water level measurements only
FLEMING	218386	Fleming	Well Inventory	400	YES	NO	Well installation completed February 2009 however, not operational; identified for water level measurement only
FRANCO	500101	Franco	Well Inventory	200	NO	YES	Water quality sample collected in October 2009; unable to collect water level measurement due to obstruction
FULTZ	212447	Fultz	Well Inventory	300	YES	YES	Water quality sample collected in October 2009
GARNER 557	558557	Garner	Plume	300	YES	NO	Well identified for water level measurements only
GARNER 635	587635	Garner	Plume	680	YES	YES	Water quality sample collected in October 2009
GGOOSE 546	628546	Galloping Goose Properties	Plume	430	NO	NO	Well not operational, unable to collect water level due to obstruction
GGOOSE 547	628547	Galloping Goose Properties	Plume	800	YES	YES	Water quality sample collected in November 2009
GL-03	539782	Copper Queen Branch	Plume	820	YES	YES	Water quality sample collected in November 2009
GOAR RANCH	610695	Goar	Well Inventory	250	YES	NO	Well identified for water level measurement only
GREGG	630852	Gregg	Plume	ND	NO	NO	Dry
HOBAN	805290	Hoban	Well Inventory	316	YES	YES	Water quality sample collected in October 2009
HOWARD	NR	Howard	Well Inventory	200	YES	YES	Water quality sample collected in October 2009
HULL 854	606854	Hull	Plume	25	NO	NO	Well not located
KEEFER	209744	Keefer	Well Inventory	245	YES	YES	Water quality sample collected in October 2009
MCCONNELL 265	539265	McConnell, Virginia	Well Inventory	216	YES	YES	Water quality sample collected in October 2009
METZLER	35-71891	Metzler	Well Inventory	351	YES	YES	Water quality sample collected in October 2009

TABLE 1
Summary of Groundwater Monitoring Fourth Quarter 2009

Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet)	Water Level Measured?	Water Sample Collected?	Status
MILLER 340	641340	Miller	Plume	200	NO	NO	Dry
MILLER 341	641341	Miller	Plume	100	NO	NO	Dry
MINOR 317	063317	Minor	Well Inventory	155	NO	NO	Owner declined participation in monitoring program
MOORE	538847	Moore	Well Inventory	220	NO	YES	Water quality sample collected in October 2009; unable to collect water level, sounder diameter too large for access port
MOROYOQUI	647847	Moroyoqui	Well Inventory	290	NO	NO	Dry
NESS	509127	Ness	Well Inventory	812	YES	YES	Water quality sample collected in November 2009
NOTEMAN / BAILEY	212483	Noteman/Bailey	Well Inventory	400	NO	YES	Water quality sample collected in October 2009; unable to collect water level due to obstruction
NSD-02	527587	Naco Sanitary District	Water Level	120	YES	NO	Well identified for water level measurements only
NSD-03	527586	Naco Sanitary District	Water Level	100	YES	NO	Well identified for water level measurements only
NWC-02	562944	Naco Water Company	Plume	312	YES	YES	Water quality sample collected in October 2009
NWC-03	203321	Naco Water Company	Plume	312	YES	YES	Water quality sample collected in October 2009
NWC-03 CAP	627684	Naco Water Company	Plume	179	YES	NO	Well identified for water level measurements only
NWC-04	551849	Naco Water Company	Well Inventory Sulfate Trend	795	NO	YES	Water quality samples collected in October, November and December 2009; unable to collect water level, sounder stuck in well
NWC 04 CAP	627685	Naco Water Company	Plume	379	NO	NO	Well Capped
NWC-06	575700	Naco Water Company	Well Inventory	410	YES	YES	Water quality sample collected in October 2009
OSBORN	643436	Osborn	Plume	258	YES	YES	Water quality sample collected in October 2009
PALMER	578819	Palmer	Well Inventory	220	NO	YES	Water quality sample collected in October 2009; no access to well casing for water level measurement
PANAGAKOS	35-76413	Panagakos	Well Inventory	200	YES	YES	Water quality sample collected in October 2009
PARRA	576415	Parra	Plume	355	NO	YES	Water quality sample collected in November 2009; unable to collect water level due to obstruction
PIONKE	613395	Pionke	Well Inventory	300	YES	YES	Water quality sample collected in October 2009
POOL	509518	Pool	Well Inventory	313	YES	YES	Water quality sample collected in October 2009
RAMIREZ	216425	Ramirez	Well Inventory	300	YES	YES	Water quality sample collected in October 2009
RAY	803772	Ray	Well Inventory	100	YES	YES	Water quality sample collected in October 2009
ROGERS 596 [2]	573596	Rogers, Ernest D	Plume	290	YES	YES	Water quality samples collected in October and November 2009
ROGERS E	216018	Rogers, Ernest M	Well Inventory	290	YES	YES	Water quality sample collected in October 2009
RUIZ	531770	Ruiz	Well Inventory	312	YES	YES	Water quality sample collected in October 2009
SCHWARTZ	210865	Schwartz	Well Inventory	305	YES	YES	Water quality sample collected in October 2009
STEPHENS	808560	Stephens	Well Inventory	NR	YES	NO	Well identified for water level measurement only
SUNBELT	201531	Sunbelt Marketing, Inc.	Well Inventory	380	YES	NO	Well identified for water level measurement only
SWAN	NR	Swan, Alan	Well Inventory	NR	YES	YES	Water quality sample collected in October 2009

TABLE 1
Summary of Groundwater Monitoring Fourth Quarter 2009

Well Name	ADWR 55 Registry No.	Owner	Monitoring Purpose	Casing Depth (feet)	Water Level Measured?	Water Sample Collected?	Status
TM-02	522573	Copper Queen Branch	Plume	640	NO	NO	Pump intake above water level; unable to collect water level due to obstruction
TM-02A	522574	Copper Queen Branch	Plume	925	YES	YES	Water quality sample collected in November 2009
TM-03	522575	Copper Queen Branch	Plume	200	YES	YES	Water quality sample collected in November 2009
TM-06 MILLER	522695	Miller	Plume	200	YES	YES	Water quality sample collected in November 2009
TM-07	522576	Copper Queen Branch	Plume	350	NO	YES	Water quality sample collected in November 2009; unable to collect water level due to obstruction
TM-10 USBP	522696	U.S. Border Patrol	Plume	290	NO	NO	Owner declined participation in monitoring program
TM-11 PIONKE	522815	Pionke	Plume	160	NO	NO	Dry
TM-13 MILLER	522698	Miller	Plume	200	NO	NO	Dry
TM-15 MILLER	522699	Miller	Well Inventory	325	NO	YES	Water quality sample collected in November 2009; unable to collect water level due to obstruction
TM-16	522578	Copper Queen Branch	Plume	115	YES	YES	Water quality sample collected in November 2009
TM-17	522700	Copper Queen Branch	Plume	200	NO	NO	Dry
TM-19	522581	Copper Queen Branch	Plume	210	NO	NO	Dry
TM-19A	522580	Copper Queen Branch	Plume	700	YES	YES	Water quality sample collected in November 2009
TM-41	562555	Copper Queen Branch	Plume	210	NO	NO	Dry
TM-42	562554	Copper Queen Branch	Plume	250	YES	YES	Water quality sample collected in November 2009
TVI 236	802236	Turquoise Valley, Inc.	Well Inventory	222	YES	YES	Water quality sample collected in October 2009
TVI 713	567713	Turquoise Valley, Inc.	Well Inventory	200	YES	NO	Well identified for water level measurements only
TVI 875	568875	Turquoise Valley, Inc.	Plume	330	NO	YES	Water quality sample collected in October 2009, no access to well casing for water level measurement
WEED	544535	Weed	Plume	320	NO	YES	Water quality sample collected in October 2009, no access to well casing for water level measurement
WEISKOPF	641802	Weiskopf	Plume	200	YES	YES	Water quality sample collected in October 2009
ZANDER	205126	Zander	Well Inventory	280	YES	YES	Water Quality sample collected in October 2009

Notes:

ADWR = Arizona Department of Water Resources
BIMA = Bisbee Municipal Airport
ft amsl = feet above mean sea level
NA = Not Applicable
ND = No Data
NR = No Record
35-71891 = ADWR 35 Database
[1] former owner ENGLUND
[2] previously identified as ROGERS 803

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
ANDERSON	613396	03/20/08	7.25	21.1	1176	431	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	05/05/08	7.03	21.8	1231	452	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	07/14/08	7.11	21.6	1260	472	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	10/15/08	7.10	21.3	1252	475	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	01/27/09	7.27	21	965	488	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	04/14/09	7.12	21.8	1229	534	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	07/14/09	7.03	22.2	1372	550	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANDERSON	613396	10/12/09	6.98	21.5	1375	510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	01/07/08	ND	ND	ND	14	14	NA	2.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	03/03/08	ND	ND	ND	16	16	NA	2.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	05/05/08	ND	ND	ND	13.3	15.9	NA	2.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	08/12/08	7.01	22.3	630	14.3	17.8	0.2	2.42	2.42	<0.01	66.4	9.1	2.1	20.0	181	5	<2	186	280	255	1.10	4.7	5.0	3.1
AWC-02	616586	10/23/08	7.31	23.1	464	15.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	03/11/09	7.19	21.8	420	15.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	04/22/09	7.17	22.6	430	14.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	07/22/09	7.24	22.7	444	14.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-02	616586	10/21/09	7.19	21.3	468	16.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	01/07/08	ND	ND	ND	41	14	NA	2.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	03/03/08	ND	ND	ND	38	14	NA	2.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	05/05/08	ND	ND	ND	37.3	12.2	NA	2.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	08/12/08	7.28	22.4	469	38.8	15.5	0.2	2.28	2.28	<0.01	62.8	8.6	2.1	22.8	156	5	<2	162	290	260	1.12	4.6	4.9	3.2
AWC-03	616585	10/23/08	7.48	21.0	462	41.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	03/11/09	7.25	21.2	445	64.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	04/22/09	7.30	21.4	452	42.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	07/22/09	7.39	22.6	456	41.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-03	616585	10/21/09	7.48	21.3	540	50.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	02/04/08	ND	ND	ND	18	40	NA	2.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	04/07/08	ND	ND	ND	18	45	NA	2.28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	06/02/08	ND	ND	ND	14.3	48	NA	2.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	08/12/08	7.08	22.5	458	21.6	47.5	0.1	1.94	1.94	<0.01	88.7	11.6	2.6	22.8	206	<2	<2	206	380	328	1.16	6.0	6.4	3.2
AWC-04	616584	10/23/08	6.91	22.2	616	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	03/11/09	7.02	21.3	539	27.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	04/22/09	6.93	22.1	560	26.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	07/22/09	7.13	22.5	587	26.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-04	616584	10/21/09	7.00	21.2	607	25.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	02/04/08	ND	ND	ND	13	15	NA	1.80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	04/07/08	ND	ND	ND	14	14	NA	1.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	06/02/08	ND	ND	ND	14.3	15.6	NA	1.86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	08/12/08	6.74	23.3	425	14.9	16.1	0.1	2.02	2.02	<0.01	50.6	6.2	2.2	35.6	164	8	<2	172	280	242	1.16	4.3	4.6	3.4
AWC-05	590620	10/23/08	7.45	21.0	422	15.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	03/11/09	7.31	22.1	398	16.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	06/03/09	7.33	22.0	418	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	07/22/09	7.49	24.4	423	14.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC-05	590620	10/21/09	7.37	21.1	433	16.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	02/27/08	7.53	21.8	980	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	05/12/08	7.40	22.1	1021	65.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	07/21/08	7.43	22.9	1034	82.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	10/13/08	7.28	21.7	980	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	01/21/09	7.66	21.6	872	164	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	04/08/09	7.56	22.7	933	47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	07/09/09	7.59	23.1	871	70.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BANKS 986	647986	10/07/09	7.50	22.2	838	67.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BF-01	539783	03/04/08	6.46	21.9	2745	1320	30.4	<0.1	0.92	0.92	<0.01	621	100	4.5	60.2	610	<2	<2	610	2850	2510	1.14	40.8	42.0	1.4
BF-01	539783	05/23/08	6.41	18.3	2698	1450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BF-01	539783	08/05/08	6.11	22.4	3095	1330	30	<2	1.09	1.09	<0.01	624	107	4.5	61.3	579	<2	<2	579	2820	2510	1.12	40.4	42.8	2.9
BF-01	539783	11/05/08	6.33	19.9	3027	1490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BF-01	539783	02/20/09	6.42	19.2	1477	1330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BF-01	539783	05/06/09	5.98	23.9	2632	1280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BF-01	539783	08/17/09	6.21	29.7	2948	1250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BF-01	539783	11/04/09	6.24	23.0	2846	1280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA	577927	02/06/08	6.69	22.2	1335	210	105	0.1	6.80	6.80	<0.01	224	48.4	12.4	65.9	510	<2	<2	510	980	1000	0.98	18.0	18.4	1.1
BIMA[1]	577927	04/25/08	6.37	23.1	1521	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA[1]	577927	05/13/08	6.58	22.7	1489	195	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA[1]	577927	06/23/08	6.30	23.3	1572	225	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA DUP	577927	06/23/08	6.30	23.3	1572	196	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA[1]	577927	07/29/08	6.44	23.0	1647	204	101	0.1	7.85	7.85	<0.01	209	46.5	12.2	63.6	456	<2	<2	456	1040	945	1.10	16.8	17.4	1.8
BIMA[1]	577927	08/28/08	M	23.0	1776	256	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA[1]	577927	09/23/08	6.29	23.0	1741	296	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA	577927	10/22/08	6.41	22.3	1801	285	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA	577927	01/20/09	6.40	21.7	1233	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA DUP	577927	01/20/09	6.40	21.7	1233	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA	577927	04/07/09	6.45	23.4	1436	212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA	577927	07/08/09	6.31	23.4	1483	189	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIMA	577927	10/05/09	6.34	22.7	1525	233	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER	633472	02/05/08	7.43	20.2	714	206	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER[1]	633472	04/21/08	7.06	21.9	753	201	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER[1]	633472	05/15/08	7.16	22.2	845	211	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER[1]	633472	06/23/08	6.93	21.5	903	193	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER[1]	633472	07/29/08	7.21	22.2	921	203	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER[1]	633472	08/27/08	7.12	22.1	864	189	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER[1]	633472	09/23/08	7.16	22.3	818	193	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BLOMMER	633472	10/22/08	7.17	21.3	873	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-1G	909474	08/27/08	7.09	24.2	808	107	76.3	0.1	13.5	13.5	<0.01	124	32.2	6.4	35.7	229	9	<2	238	580	588	0.99	10.1	10.6	2.4
BMO-2008-1G	909474	11/11/08	7.00	20.8	721	143	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-1G	909474	02/25/09	7.01	22.0	860	109	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-1G	909474	04/28/09	7.04	22.2	762	198	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-1G	909474	08/04/09	7.23	22.8	950	104	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-1G	909474	10/27/09	7.11	21.9	922	103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-3B	909147	07/18/08	7.35	23.9	615	106	24	0.3	3.68	3.72	0.04	64.5	12	2.9	53.6	151	3	<2	154	390	373	1.05	6.2	6.6	3.1
BMO-2008-3B	909147	11/04/08	7.36	21.4	599	179	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-3B DUP	909147	11/04/08	7.36	21.4	599	177	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-3B	909147	02/19/09	7.24	21.4	664	155	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-3B	909147	05/11/09	7.23	22.1	631	149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-3B	909147	08/06/09	7.33	21.4	718	151	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
BMO-2008-3B DUP	909147	08/06/09	7.33	21.4	718	156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-3B	909147	10/26/09	7.32	21.8	684	153	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-4B	910096	12/11/08	7.34	22.8	374	9.4	4.3	0.2	0.78	0.78	<0.01	49.2	7.1	1.4	33.4	183	<2	<2	183	240	228	1.05	4.2	4.5	3.4
BMO-2008-4B	910096	02/18/09	7.17	23.2	370	13.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-4B	910096	04/30/09	7.33	24.5	376	11.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-4B DUP	910096	04/30/09	7.33	24.5	376	11.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-4B	910096	08/06/09	7.53	24.6	397	11.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-4B	910096	10/27/09	7.53	23.7	379	11.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5B	909653	09/30/08	7.08	22.0	688	193	15	0.3	2.02	2.02	<0.01	108	17.0	2.8	40.1	155	<2	<2	155	510	478	1.07	7.7	8.6	5.5
BMO-2008-5B	909653	02/18/09	7.03	21.5	691	192	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5B	909653	04/27/09	7.32	22.1	605	177	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5B	909653	08/04/09	7.35	22.3	724	174	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5B	909653	10/29/09	7.29	21.8	731	181	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5B DUP	909653	10/29/09	7.29	21.8	731	185	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5M	909552	10/02/08	7.13	23.6	551	107	15.1	0.2	1.85	1.85	<0.01	75.8	11.4	2.6	34.1	138	<2	<2	138	390	337	1.16	5.5	6.2	6.0
BMO-2008-5M	909552	02/18/09	7.06	22.5	562	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5M	909552	04/27/09	7.50	22.9	501	111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5M	909552	08/04/09	7.53	23.1	605	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-5M	909552	10/29/09	7.35	22.4	610	123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6B	909146	07/16/08	7.36	24.1	475	53.3	13	0.4	1.97	1.97	<0.01	59.7	10.2	3.0	26.2	151	9	<2	160	300	274	1.09	4.8	5.0	2.0
BMO-2008-6B	909146	11/04/08	7.41	21.5	398	60.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6B	909146	02/19/09	7.23	21.1	444	54.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6B	909146	04/27/09	7.55	21.7	389	52.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6B	909146	08/04/09	7.48	23.4	470	48.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6B	909146	10/26/09	7.29	22.5	448	48.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6M	909019	07/10/08	M	22.1	702	182	16	0.3	1.98	1.98	<0.01	104	17.9	3.60	32.5	144	9	<2	153	480	460	1.04	7.4	8.1	4.5
BMO-2008-6M	909019	11/04/08	7.33	21.8	621	199	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6M	909019	02/20/09	7.11	22.0	702	193	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6M	909019	04/28/09	7.34	22.4	595	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6M	909019	08/04/09	7.40	23.3	750	189	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-6M	909019	10/26/09	7.18	22.4	727	187	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-7M	908794	07/14/08	7.63	25.2	500	31.4	10.4	0.3	1.55	1.55	<0.01	32.4	11.4	2.70	60.8	188	13	<2	201	290	282	1.03	5.1	5.3	1.9
BMO-2008-7M	908794	11/06/08	7.53	22.6	380	34.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-7M	908794	02/18/09	7.31	23.3	452	27.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-7M	908794	05/11/09	7.43	24.4	426	26.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-7M	908794	08/06/09	7.81	24.1	486	25.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-7M	908794	10/27/09	7.53	23.0	470	26.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8B	910097	12/05/08	6.47	20.1	2480	1890	80	0.1	2.91	2.93	0.02	529	195	14.4	46.4	630	<2	<2	630	3080	3150	0.98	54.7	44.9	-9.8
BMO-2008-8B	910097	02/19/09	6.19	21.0	2958	1570	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8B	910097	05/05/09	6.18	21.3	2888	1370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8B	910097	08/10/09	6.42	21.5	2897	1250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8B	910097	11/09/09	6.33	21.8	2889	1510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8B DUP	910097	11/09/09	6.33	21.8	2889	1520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8M	909711	12/09/08	7.16	23.4	852	197	13	0.3	1.78	1.78	<0.01	89	43.0	5.80	64.9	260	<2	<2	260	640	576	1.11	9.8	11.0	5.8
BMO-2008-8M	909711	02/19/09	7.27	23.5	758	147	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8M DUP	909711	02/19/09	7.27	23.5	758	149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8M	909711	05/05/09	7.19	25.1	680	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8M	909711	08/10/09	7.49	24.8	673	107	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-8M	909711	11/05/09	7.30	25.4	675	104	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-9M	909255	08/08/08	7.72	25.7	415	47.3	14	0.10	1.90	1.93	0.03	28.0	17.8	3.4	64.6	193	6	<2	199	320	306	1.05	5.5	5.7	1.8
BMO-2008-9M	909255	11/05/08	7.89	21.4	444	54.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-9M	909255	02/26/09	7.71	24.5	482	28.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-9M	909255	05/12/09	7.76	24.8	449	51.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-9M	909255	08/17/09	7.76	25.6	534	53.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-9M	909255	11/03/09	7.82	24.9	552	56.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GU	909272	08/04/08	6.41	23.6	3660	2210	60	<2	0.13	0.16	<0.01	649	311	15.3	37.6	984	<2	<2	984	3810	3870	0.98	67.8	60.0	-6.1
BMO-2008-10GU	909272	11/05/08	6.15	20.2	3343	1890	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GU	909272	02/25/09	5.96	22.7	3426	1740	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GU	909272	05/06/09	5.99	23.2	3359	1710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GU	909272	08/11/09	6.28	22.5	3348	1690	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GU	909272	11/02/09	6.27	21.8	3157	1730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GL	909435	08/20/08	6.22	29.5	2924	1320	30	<2	<0.02	<0.02	<0.01	579	167	10.5	90.5	870	<2	<2	870	2970	2720	1.09	46.0	46.9	1.0
BMO-2008-10GL	909435	11/05/08	6.47	25.3	2573	1290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GL	909435	02/25/09	6.34	26.8	2646	1180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GL	909435	05/12/09	6.35	26.2	2402	1120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GL	909435	08/11/09	6.52	27.3	2661	1030	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-10GL	909435	11/02/09	6.52	26.7	2565	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-11G	909434	08/22/08	8.02	28.2	359	14.2	2.8	0.2	0.56	0.56	<0.01	10.7	5.1	1.7	64.2	149	14	<2	163	220	205	1.07	3.6	3.8	2.7
BMO-2008-11G	909434	11/12/08	7.96	24.2	257	13.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-11G	909434	02/26/09	7.92	25.1	319	12.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-11G	909434	04/28/09	8.14	25.5	273	11.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-11G	909434	08/12/09	8.24	25.3	365	11.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-11G	909434	11/09/09	8.03	25.5	339	13.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13B	909551	10/03/08	6.49	21.6	2180	980	23	<0.2	1.92	1.92	<0.01	420	79.8	6.8	53.0	347	<2	<2	347	2040	1780	1.15	28.3	30.1	3.1
BMO-2008-13B	909551	02/17/09	6.51	20.9	1941	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13B	909551	05/06/09	6.55	22.0	1891	930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13B	909551	08/05/09	6.63	21.5	2137	950	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13B	909551	10/28/09	6.81	19.7	2259	1010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13M	909760	12/03/08	7.73	24.1	1463	494	20	0.7	0.02	0.02	<0.01	35.1	13.2	3.4	286	259	3	<2	262	970	1010	0.96	16.2	15.5	-2.2
BMO-2008-13M	909760	02/17/09	8.21	22.7	1340	441	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13M	909760	04/29/09	8.04	24.8	1126	217	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13M	909760	08/05/09	8.04	25.4	1392	387	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BMO-2008-13M	909760	10/28/09	8.12	21.4	1347	403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BURKE	212268	02/07/08	7.17	23.0	411	29.5	31.8	0.3	1.83	1.83	<0.01	62.3	22.8	2.8	26.0	212	<2	<2	212	360	311	1.16	5.9	6.2	2.5
BURKE	212268	04/22/08	7.13	27.0	423	26	11	0.2	2.88	2.88	<0.01	52.1	22	2.3	16.9	191	<2	<2	191	260	NA	NA	NA	NA	NA
BURKE	212268	08/05/08	7.06	26.8	496	21.9	10	0.2	2.81	2.85	<0.01	52.5	22.3	2.3	16.1	187	<2	<2	187	260	250	1.04	4.6	5.2	6.1
BURKE	212268	10/20/08	7.57	26.0	466	20.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BURKE	212268	02/11/09	7.23	25.0	363	23.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BURKE	212268	04/28/09	7.16	26.1	369	24.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BURKE	212268	08/19/09	7.36	26.7	486	22.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BURKE	212268	12/16/09	7.28	25.7	488	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	03/06/08	7.73	17.8	408	7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	05/05/08	7.15	22.1	421	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	07/14/08	7.43	23.2	434	5.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	10/15/08	7.41	22.5	420	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
CHAMBERS	629807	01/27/09	7.57	21.5	312	5.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	04/14/09	7.42	22.4	384	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	07/15/09	7.83	23.4	414	4.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHAMBERS	629807	10/13/09	7.41	22.6	410	6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1	903992	02/22/08	6.93	21.2	1401	720	19.8	0.3	2.33	2.33	<0.01	257.0	64.5	7.7	56.5	206	11	<2	217	1360	1270	1.07	20.2	20.8	1.5
COB MW-1	903992	05/20/08	6.88	22.0	2050	980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1	903992	07/30/08	6.88	21.7	1780	730	19.8	0.1	2.50	2.50	<0.01	273	69.3	8.0	58.9	223	<2	<2	223	1500	1300	1.15	20.5	22.1	3.8
COB MW-1	903992	10/23/08	6.95	21.2	1690	750	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1	903992	02/12/09	6.92	21.1	1313	750	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1	903992	04/21/09	7.15	22.7	1366	720	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1	903992	07/22/09	6.94	21.6	1570	680	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1 DUP	903992	07/22/09	6.94	21.6	1570	730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-1	903992	10/22/09	6.81	22.3	1582	820	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-2	903984	02/22/08	7.28	20.2	417	41	19.4	0.3	6.49	6.49	<0.01	66.4	9.0	2.1	25.5	156	12	<2	168	340	298	1.14	5.2	5.2	0.0
COB MW-2	903984	05/20/08	7.32	21.2	490	40.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-2	903984	07/30/08	7.34	20.8	511	37.6	19.9	<0.1	6.80	6.80	<0.01	66.3	9.0	2.1	26.6	158	<2	<2	158	330	286	1.15	4.9	5.2	3.0
COB MW-2	903984	10/23/08	7.36	20.3	498	34.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-2	903984	02/12/09	7.35	20.2	379	35.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-2	903984	04/23/09	7.33	21.8	431	34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-2	903984	07/22/09	7.36	21.3	483	33.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-2	903984	10/22/09	7.24	21.0	454	32.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3	906823	02/28/08	7.39	21.0	416	57.8	16.2	0.2	2.0	2.0	<0.01	62.2	8.9	2.2	25.5	159	<2	<2	159	300	277	1.08	5.0	5.0	0.0
COB MW-3	906823	03/27/08	ND	ND	ND	57.7	16.5	0.301	NA	2.04	NA	NA	9.13	2.65	25.0	158	18	<10	176	332	NA	NA	NA	NA	NA
COB MW-3	906823	04/30/08	ND	ND	ND	37	14.5	0.12	NA	2.05	NA	62.8	8.87	3.13	24.1	184	<10	<10	184	68	NA	NA	NA	NA	NA
COB MW-3	906823	05/20/08	7.56	22.3	473	35.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3	906823	07/24/08	ND	ND	ND	64.9	16.4	0.354	NA	2.03	NA	61.1	NA	2.13	21.9	176	<10	<10	176	318	NA	NA	NA	NA	NA
COB MW-3	906823	07/30/08	7.64	22.3	541	67.3	16.1	0.2	2.41	2.41	<0.01	66.1	9.2	2.4	26.5	149	<2	<2	149	320	288	1.11	5.0	5.2	2.0
COB MW-3	906823	10/09/08	ND	ND	ND	52.5	17	0.463	NA	1.83	NA	60.7	8.55	2.68	23.1	162	<10	<10	162	355	NA	NA	NA	NA	NA
COB MW-3	906823	10/23/08	7.43	20.8	507	76.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3	906823	02/12/09	7.35	21.1	432	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3	906823	04/23/09	7.35	22.6	407	43.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3	906823	07/22/09	7.38	21.5	460	52.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3	906823	10/22/09	7.40	21.3	466	74.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB MW-3 DUP	906823	10/22/09	7.40	21.3	466	73.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB WL	593116	02/22/08	6.99	20.6	919	90	106	0.3	3.91	3.91	<0.01	128	34.3	7.2	47.8	269	11	<2	280	650	603	1.08	10.8	11.5	3.1
COB WL	593116	03/24/08	ND	ND	ND	98.2	101	0.305	NA	3.55	NA	NA	NA	9.62	56.6	308	<10	<10	308	657	NA	NA	NA	NA	NA
COB WL	593116	04/28/08	ND	ND	ND	98.7	106	0.274	NA	3.49	NA	NA	36.3	9.5	59.6	308	<10	<10	308	743	NA	NA	NA	NA	NA
COB WL	593116	05/20/08	7.30	21.9	1053	98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB WL	593116	07/30/08	7.17	22.0	1098	97.1	110	0.1	4.02	4.02	<0.01	130	35	7.5	51.5	274	<2	<2	274	700	613	1.14	10.9	11.8	4.0
COB WL	593116	07/30/08	ND	ND	ND	100	114	0.234	NA	3.55	NA	124	35.6	9.44	57.8	304	<10	<10	304	653	NA	NA	NA	NA	NA
COB WL	593116	10/15/08	ND	ND	ND	107	116	0.26	NA	3.47	NA	132	34.8	8.05	50.7	290	<10	<10	290	651	NA	NA	NA	NA	NA
COB WL	593116	10/23/08	7.23	21.4	1075	104	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB WL	593116	02/12/09	6.98	20.6	814	94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB WL	593116	04/23/09	7.29	22.2	923	98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB WL	593116	07/22/09	7.17	22.5	1037	97.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COB WL	593116	10/22/09	7.17	22.4	988	96.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	02/12/08	6.88	21.6	1470	520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	05/29/08	7.01	22.0	1459	520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	07/31/08	6.86	21.6	1502	536	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	10/20/08	8.44	24.7	1510	518	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	02/11/09	6.68	21.4	1147	567	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	04/21/09	6.92	22.5	1150	499	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	07/22/09	7.00	22.4	1413	460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COLLINS	565260	10/20/09	6.60	21.9	1432	513	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER	623564	02/14/08	7.02	20.8	371	33	17.5	0.3	2.82	2.82	<0.01	47.9	13.8	2.2	25.3	154	9	<2	163	270	254	1.06	4.6	4.7	1.1
COOPER	623564	05/14/08	8.08	22.1	419	34.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER	623564	07/31/08	7.81	28.4	455	33.7	16.9	0.2	2.68	2.68	<0.01	48.9	13.3	2.1	24.6	150	7	<2	157	260	249	1.04	4.5	4.6	1.1
COOPER	623564	10/20/08	8.44	24.7	448	31.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER	623564	02/11/09	7.32	19.2	333	34.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER	623564	04/21/09	8.19	24.9	346	33.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER	623564	07/20/09	8.45	29.8	430	32.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER	623564	10/14/09	7.85	24.6	423	33.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER C	637069	03/20/08	6.93	21.3	2081	880	49	<0.1	3.09	3.10	0.01	393	59.8	6.0	45.0	229	<2	<2	229	1810	1690	1.07	27.0	26.7	0.6
COOPER C	637069	05/05/08	6.78	22.4	2139	990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER C	637069	07/15/08	6.86	22.3	2162	1040	46.5	<0.1	3.24	3.24	<0.01	386	58.8	5.8	43.3	235	<2	<2	235	1860	1740	1.07	28.1	26.2	-3.5
COOPER C DUP	637069	07/15/08	6.86	22.3	2162	960	46.4	0.1	3.25	3.25	<0.01	398	61.7	6.1	46.2	234	<2	<2	234	1860	1670	1.11	26.4	27.2	1.5
COOPER C	637069	10/16/08	6.80	21.4	2078	1020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER C	637069	01/27/09	6.92	20.5	1489	950	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER C	637069	04/14/09	6.85	21.6	1833	930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER C	637069	07/14/09	6.75	22.1	1972	910	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COOPER C	637069	10/12/09	6.70	21.8	1858	830	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DODSON	644927	02/20/08	7.61	17.3	857	54	129	0.3	10.70	10.70	<0.01	111	37.5	12.3	41.2	252	14	<2	266	590	598	0.99	10.8	10.8	0.0
DODSON	644927	05/12/08	7.11	21.1	1118	34.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DODSON	644927	07/24/08	7.25	21.6	1233	49.3	160	0.2	13.10	13.10	<0.01	124	43.3	13.7	51.3	223	12	<2	235	740	646	1.15	11.2	12.4	5.1
DODSON	644927	10/13/08	7.15	20.5	1095	56.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DODSON	644927	01/22/09	7.20	20.4	892	51.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DODSON	644927	04/09/09	7.09	21.4	1103	50.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DODSON	644927	07/08/09	7.18	21.1	1153	55.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DODSON	644927	10/06/09	7.07	21.1	1140	49.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DURAZO	NR	02/10/09	7.22	18.8	848	386	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DURAZO	NR	04/20/09	7.37	22.7	901	367	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DURAZO	NR	07/15/09	7.57	22.8	1102	332	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DURAZO	NR	10/14/09	7.17	21.9	1048	377	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST	599796	02/08/08	7.45	19.9	423	10.6	31.2	0.4	6.30	6.30	<0.01	59.9	24.3	2.5	31.6	227	<2	<2	227	320	325	0.98	6.1	6.4	2.4
EAST	599796	05/14/08	7.31	20.9	595	14.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST	599796	07/23/08	7.34	20.8	605	11.8	33.3	0.4	6.10	6.10	<0.01	59.5	24.4	2.4	31.4	217	6	<2	223	350	326	1.07	6.0	6.4	3.2
EAST	599796	10/14/08	7.33	20.3	531	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST	599796	01/20/09	7.33	20.0	482	12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST	599796	04/08/09	7.32	20.6	555	15.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST	599796	07/13/09	7.33	21.2	613	13.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST	599796	10/08/09	7.29	20.8	593	13.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPPELE 641	805641	03/11/08	7.98	21.4	646	21.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPPELE 641	805641	05/12/08	7.21	21.7	667	24.7	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPPELE 641	805641	07/21/08	7.49	23.9	605	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPPELE 641	805641	10/14/08	7.56	20.4	642	21.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
EPPELE 641	805641	01/21/09	7.60	21.1	500	22.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPPELE 641	805641	04/08/09	7.56	22.4	538	19.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPPELE 641	805641	07/09/09	7.43	24.3	550	17.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	02/06/08	7.47	19.6	1301	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	05/05/08	6.93	23.1	1557	680	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	07/14/08	7.00	22.7	1586	680	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	10/15/08	7.20	20.5	1560	680	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	01/22/09	7.19	20.1	1178	740	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	04/14/09	7.24	23.1	1416	690	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	07/13/09	7.30	27.3	1532	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FRANCO	500101	10/12/09	7.16	24.2	1493	650	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ	212447	02/27/08	6.76	21.1	1827	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ[1]	212447	04/21/08	6.74	22.0	1739	137	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ[1]	212447	05/14/08	6.88	22.3	1532	131	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ[1]	212447	06/23/08	6.74	22.0	1788	111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ[1]	212447	07/29/08	6.74	22.2	1989	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ[1]	212447	08/28/08	M	21.6	1889	137	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ[1]	212447	09/23/08	6.82	21.9	1821	137	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ	212447	10/22/08	6.80	21.4	1940	145	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ	212447	01/21/09	6.74	21.2	1481	82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ	212447	04/09/09	6.78	21.5	1695	138	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ	212447	07/13/09	7.04	23.4	1452	81	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ	212447	10/08/09	7.00	21.6	1262	72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FULTZ DUP	212447	10/08/09	7.00	21.6	1262	71.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GALLANT	502527	02/11/08	7.46	20.2	604	17.9	12.7	0.2	3.04	3.04	<0.01	106	15.9	4.3	25.6	344	<2	<2	344	400	402	1.00	7.8	7.8	0.0
GALLANT	502527	07/23/08	7.26	21.2	925	20.9	56.9	0.1	19.2	19.20	<0.01	138	19.8	4.8	29.6	303	<2	<2	303	560	537	1.04	9.4	9.9	2.6
GARNER 635	587635	02/04/08	7.61	22.7	479	37.8	13.7	0.2	1.68	1.69	0.01	39.2	8.2	2.8	65.0	182	<2	<2	182	290	284	1.02	4.9	5.5	5.8
GARNER 635	587635	05/05/08	7.26	24.9	468	35.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GARNER 635	587635	07/15/08	7.63	25.6	480	37.4	13.5	0.2	1.92	1.92	<0.01	37.6	7.8	2.5	60.2	163	16	<2	179	300	281	1.07	4.0	5.2	4.0
GARNER 635	587635	10/15/08	7.65	24.1	472	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GARNER 635	587635	01/28/09	7.69	23.4	368	37.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GARNER 635	587635	04/15/09	7.83	24.1	412	36.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GARNER 635	587635	07/16/09	7.56	25.1	445	35.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GARNER 635	587635	10/14/09	7.58	25.2	446	36.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GGOOSE 547	628547	05/21/08	7.08	22.7	856	199	37.1	0.1	7.14	7.14	<0.01	113	32.9	5.5	25.6	194	<2	<2	194	600	561	1.07	9.6	9.6	0.0
GGOOSE 547	628547	08/15/08	7.02	24.8	915	178	35.4	0.1	8.90	8.90	<0.01	117	32.4	5.6	25.4	187	<2	<2	187	590	545	1.08	9.1	9.7	3.2
GGOOSE 547	628547	10/29/08	7.27	22.6	897	216	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GGOOSE 547	628547	02/24/09	7.06	23.8	851	186	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GGOOSE 547	628547	05/14/09	7.15	23.9	743	174	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GGOOSE 547	628547	08/19/09	7.20	23.8	887	175	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GGOOSE 547	628547	11/11/09	7.15	23.1	897	188	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GL-03	539782	03/04/08	7.43	25.7	417	20.3	20.3	<0.1	0.75	0.77	0.02	46.7	22.8	2.6	18.7	192	<2	<2	192	260	250	1.04	4.8	5.1	3.0
GL-03	539782	05/22/08	7.06	25.3	647	43.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GL-03	539782	08/04/08	7.10	26.8	673	36.1	21.4	<0.1	0.60	0.62	0.02	68.7	38.9	3.4	19.5	278	<2	<2	278	400	358	1.12	6.9	7.5	4.2
GL-03	539782	11/12/08	7.21	25.2	478	34.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GL-03	539782	02/26/09	7.05	26.5	603	54.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GL-03	539782	05/05/09	6.91	28.1	682	43.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GL-03	539782	08/01/09	7.12	27.4	768	43.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GL-03	539782	11/10/09	6.96	27.0	692	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	02/27/08	6.93	22.1	1359	510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	05/07/08	6.88	22.3	1532	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	07/14/08	6.88	23.1	1719	690	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	10/16/08	6.98	22.4	1624	692	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	01/28/09	6.82	21.3	1220	580	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	04/15/09	7.07	21.7	1423	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	07/14/09	6.78	22.6	1551	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN	805290	10/15/09	6.75	22.7	1487	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOBAN DUP	805290	10/15/09	6.75	22.7	1487	780	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	03/04/08	7.06	20.4	1280	571	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	05/08/08	6.95	21.0	1494	673	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	07/14/08	7.00	21.1	1566	610	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	10/15/08	7.00	20.6	1598	683	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	01/28/09	6.82	21.0	1203	640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD DUP	NR	01/28/09	6.82	21.0	1203	640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	04/15/09	7.02	21.5	1397	620	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	07/15/09	7.16	21.5	1539	640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOWARD	NR	10/12/09	6.89	21.4	1414	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	02/06/08	7.70	19.0	378	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	05/06/08	7.19	20.3	512	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	07/16/08	7.21	21.4	539	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	10/28/08	7.32	20.1	534	21.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	01/28/09	7.42	19.5	356	6.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	04/16/09	7.29	20.0	452	7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	07/14/09	7.35	22.1	533	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEEFER	209744	10/13/09	7.24	20.7	516	8.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	02/20/08	7.21	21.1	1435	720	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	05/06/08	6.77	21.6	1668	737	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	07/15/08	6.91	22.3	1775	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	10/15/08	6.82	21.3	1686	703	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	01/28/09	6.85	21	1274	660	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	04/15/09	7.04	21.3	1472	657	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	07/15/09	7.01	22.2	1607	662	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCCONNELL 265	539265	10/12/09	6.77	21.7	1594	666	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	03/05/08	7.27	21.6	1055	317	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	05/15/08	7.12	22.8	1051	329	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	07/31/08	7.16	22.5	1078	317	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	10/20/08	7.24	22.2	1080	305	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER DUP	35-71891	10/20/08	7.24	22.2	1080	326	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	02/11/09	7.12	21.3	818	321	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	04/20/09	7.22	23.2	845	313	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	07/15/09	7.41	22.9	1031	293	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER DUP	35-71891	07/15/09	7.41	22.9	1031	309	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METZLER	35-71891	10/14/09	7.1	22.7	989	315	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	02/20/08	7.69	22.2	362	7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	05/08/08	7.09	22.4	432	7.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
MOORE	538847	07/16/08	7.34	23.0	482	9.8	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	10/29/08	7.32	22.4	452	19.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	01/29/09	7.11	21.7	328	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	04/16/09	7.40	22.1	374	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	07/15/09	7.44	23.3	439	5.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOORE	538847	10/13/09	7.36	22.6	429	7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NESS	509127	07/24/08	7.35	26.5	563	50.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NESS	509127	10/16/08	7.47	21.4	542	48.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NESS	509127	01/26/09	7.39	17.2	422	52.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NESS	509127	05/11/09	7.52	28.8	472	45.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NESS	509127	08/11/09	7.56	28.7	525	39.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NESS	509127	11/12/09	7.53	24.5	537	51.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	02/05/08	6.70	19.9	1317	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	05/13/08	6.67	23.0	1445	272	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	07/24/08	6.68	24.2	1539	274	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	10/23/08	6.57	23.2	1643	356	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	01/19/09	6.38	22.9	1098	322	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	04/07/09	6.56	23.8	1375	303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	07/08/09	6.55	24.6	1405	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTEMAN	212483	10/05/09	6.48	24.1	1442	281	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NSD-02	527587	02/05/08	ND	ND	ND	43	52.5	0.201	<1.00	NA	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	388	NA	NA	NA	NA	NA
NSD-02	527587	07/07/08	8.02	21.0	609	44	42	0.0431	0.641	NA	0.007	NA	NA	NA	NA	NA	NA	NA	NA	369	NA	NA	NA	NA	NA
NSD-03	527586	02/05/08	ND	ND	ND	70.7	14.1	0.186	3.20	NA	<0.010	NA	NA	NA	NA	NA	NA	NA	NA	396	NA	NA	NA	NA	NA
NSD-03	527586	07/07/08	7.64	21.0	570	58.9	11.6	0.041	3.20	NA	0.011	NA	NA	NA	NA	NA	NA	NA	NA	372	NA	NA	NA	NA	NA
NWC-02	562944	10/27/08	7.47	22.2	438	5.1	20.7	0.1	2.74	2.74	<0.01	63.6	8.3	1.1	20.2	176	<2	<2	176	280	237	1.18	4.4	4.7	3.3
NWC-02	562944	02/12/09	7.58	21.6	330	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-02	562944	04/23/09	7.39	23.8	373	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-02	562944	07/21/09	7.62	23.9	408	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-02	562944	10/21/09	7.32	22.6	436	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	03/04/08	ND	ND	ND	560	30	NA	4.64	NA	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	06/09/08	ND	ND	ND	524	NA	NA	4.75	NA	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	10/27/08	7.07	21.9	1374	489	30	<0.1	4.41	4.41	<0.01	222	34.1	3.5	47.2	181	<2	<2	181	1010	954	1.06	15.10	16.10	3.20
NWC-03	203321	02/12/09	7.06	20.2	1023	412	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	04/23/09	6.98	21.9	1129	466	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03 DUP	203321	04/23/09	6.98	21.9	1129	460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	07/21/09	7.21	22.9	1194	458	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	10/21/09	6.94	21.8	1224	444	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-03	203321	12/18/09	7.04	21.2	1276	450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04	551849	03/04/08	ND	ND	ND	240	41	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04	551849	06/09/08	ND	ND	ND	231	41.9	NA	6.25	NA	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04	551849	10/27/08	7.32	25.0	856	162	41.4	0.1	6.54	6.54	<0.01	91.5	36.7	6.2	41.5	182	<2	<2	182	540	518	1.04	8.6	9.5	5.0
NWC-04[1]	551849	01/22/09	7.23	22.9	688	184	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	02/12/09	7.20	19.8	699	181	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04 DUP	551849	02/12/09	7.20	19.8	699	198	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	03/11/09	7.15	23.4	846	197	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	04/23/09	7.21	24.1	797	188	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	05/28/09	7.01	24.1	933	210	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	06/24/09	6.93	25.6	792	169	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	07/21/09	7.48	24.3	859	193	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	08/19/09	7.12	24.5	906	183	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	09/23/09	7.16	23.8	953	202	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	10/21/09	7.18	24.3	875	191	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	11/18/09	7.24	22.9	909	191	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-04[1]	551849	12/16/09	7.28	22.3	926	193	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-06	575700	03/04/08	ND	ND	ND	7.9	13	NA	1.71	NA	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-06	575700	06/09/08	ND	ND	ND	7.2	12.9	NA	1.78	NA	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-06	575700	10/27/08	7.35	23.3	414	6.4	13.4	0.2	1.86	1.86	<0.01	54.5	7.4	1.4	26.4	173	<2	<2	173	260	222	1.17	4.1	4.5	4.7
NWC-06	575700	02/12/09	7.54	21.8	306	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-06	575700	04/23/09	7.30	24.5	354	7.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-06	575700	07/21/09	7.63	23.5	388	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWC-06	575700	10/21/09	7.26	23.2	413	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OSBORN	643436	02/25/08	7.35	22.4	508	16.4	18.2	0.3	3.76	3.76	<0.01	84.4	15.4	4.3	25.2	246	29	<2	275	370	357	1.04	6.6	6.7	0.8
OSBORN	643436	05/13/08	7.22	22.2	576	17.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OSBORN	643436	07/22/08	7.24	22.9	618	17.7	19.7	0.4	4.38	4.4	<0.01	80.3	15	4.2	24.7	252	29	<2	281	350	362	0.97	6.8	6.4	-3.0
OSBORN DUP	643436	07/22/08	7.24	22.9	618	17.5	19.6	0.3	4.65	4.7	<0.01	80.9	15.1	4.2	25.0	250	31	<2	281	350	364	0.96	6.8	6.4	-3.0
OSBORN	643436	10/16/08	7.39	22.4	595	15.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OSBORN	643436	01/20/09	7.33	22.4	469	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OSBORN	643436	04/07/09	7.25	24.0	542	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OSBORN	643436	08/18/09	7.16	24.6	643	17.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OSBORN	643436	10/05/09	7.14	22.9	599	17.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PALMER	578819	02/14/08	7.91	17.5	435	15.9	11.3	0.4	2.13	2.13	<0.01	31.9	27.1	5.4	50.1	235	15	< 2	251	300	308	0.97	5.8	6.1	2.5
PALMER	578819	05/13/08	7.92	22.9	508	16.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PALMER	578819	07/22/08	7.64	25.8	548	16.2	11.3	0.4	2.34	2.34	<0.01	30	25.4	5.1	47.9	226	39	<2	265	300	321	0.93	6.1	5.8	-2.5
PALMER	578819	10/16/08	7.61	17.0	527	15.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PALMER	578819	01/20/09	7.33	19.4	441	14.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PALMER	578819	04/08/09	7.65	19.1	475	15.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PALMER	578819	07/08/09	7.47	27.2	521	14.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PALMER	578819	10/05/09	7.81	22.2	538	16.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	04/21/08	6.80	20.5	1228	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	07/21/08	6.95	21.9	1390	444	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	10/13/08	6.86	21.2	1386	480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS DUP	35-76413	10/13/08	6.86	21.2	1386	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	01/22/09	6.92	19.7	997	397	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	04/09/09	6.81	21.7	1228	431	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS DUP	35-76413	04/09/09	6.81	21.7	1228	426	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	07/09/09	6.89	22.3	1469	490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PANAGAKOS	35-76413	10/06/09	6.83	21.1	1328	472	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PARRA	576415	02/11/08	7.08	21.8	1067	360	33.4	0.1	4.17	< 0.04	<0.01	178	50.4	4.4	31.6	177	<2	<2	177	880	783	1.12	12.3	14.5	8.2
PARRA	576415	05/15/08	7.10	21.8	1200	405	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PARRA	576415	07/31/08	7.00	22.4	1248	423	33.5	<0.1	4.23	4.23	<0.01	181	49.8	4.5	32.4	213	<2	<2	213	930	871	1.07	14.4	14.7	1.0
PARRA DUP	576415	07/31/08	7.00	22.4	1248	404	33.5	<0.1	4.33	4.33	<0.01	177	48.5	4.3	30.9	212	<2	<2	212	920	845	1.09	14.0	14.3	1.1
PARRA	576415	10/20/08	7.07	22.9	1246	387	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PARRA	576415	02/13/09	7.24	22.1	965	405	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PARRA	576415	04/20/09	7.10	22.6	971	372	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
PARRA	576415	07/20/09	7.17	23.9	1174	375	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PARRA	576415	10/20/09	6.80	22.5	1188	388	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	02/06/08	7.53	19.9	910	394	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	05/07/08	7.08	21.4	1100	391	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	07/17/08	6.99	21.9	1209	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	10/27/08	7.03	20.8	1175	460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	01/29/09	7.13	19.9	847	385	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	04/14/09	7.58	20.7	1053	411	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	07/13/09	7.35	21.5	1165	472	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIONKE	613395	10/07/09	7.43	21.1	1100	403	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	02/20/08	7.95	20.9	497	134	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	05/19/08	7.40	22.2	585	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	07/31/08	7.47	22.3	599	117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	10/21/08	7.51	21.4	598	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	02/13/09	7.62	20.8	473	141	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	04/21/09	7.73	22.6	470	124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	07/20/09	7.76	22.9	579	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POOL	509518	10/20/09	7.22	21.2	577	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POWER	624535	02/12/08	7.11	18.9	428	15.5	6.1	0.1	7.00	7.00	<0.01	95	7.6	3.8	7.4	242	<2	< 2	242	310	312	0.99	5.8	5.8	0.0
POWER	624535	07/22/08	7.10	21.7	795	20.2	37.8	<0.1	24.1	24.1	<0.01	124	11	3.8	13.6	222	29	<2	251	550	479	1.15	8.2	7.8	-2.5
RAMIREZ	216425	02/04/08	7.47	21.7	408	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	05/06/08	7.19	22.7	405	8.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	07/17/08	7.32	24.5	439	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	10/27/08	7.41	22.2	412	7.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	01/29/09	7.24	22.2	301	8.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	04/16/09	7.49	22.4	344	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	07/10/09	7.52	23.9	411	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAMIREZ	216425	10/06/09	7.30	23.8	388	8.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY	803772	02/15/08	7.30	19.1	1540	159	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY [1]	803772	04/21/08	6.92	21.3	1418	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY [1]	803772	05/13/08	7.05	20.9	1418	123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY [1]	803772	06/23/08	6.87	21.1	1593	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY [1]	803772	07/29/08	6.98	21.8	1411	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY [1]	803772	08/28/08	M	21.1	1519	129	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY [1]	803772	09/23/08	6.90	22.2	1519	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY	803772	10/22/08	6.96	20.8	1604	145	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY	803772	01/20/09	6.92	20.6	1355	88	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY	803772	04/08/09	6.85	21.4	1759	178	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY	803772	07/09/09	6.93	22.3	1434	126	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RAY	803772	10/07/09	6.98	21.3	1288	127	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803	641803	02/07/08	7.45	18.6	601	138	13.2	0.2	4.69	4.71	0.02	94	11.7	3.0	26.6	148	<2	<2	148	410	383	1.07	6.3	6.9	4.5
ROGERS 803 [1]	641803	04/21/08	7.32	21.4	552	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803 [1]	641803	05/08/08	7.14	21.2	622	141	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803 [1]	641803	06/23/08	7.06	22.9	660	129	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803 [1]	641803	07/29/08	6.78	23.1	339	134	13.1	0.2	4.30	4.30	<0.01	92.5	12.6	3.3	28.7	149	<2	<2	149	430	393	1.09	6.4	7.0	4.5
ROGERS 803 [1]	641803	08/28/08	7.18	21.6	635	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803 [1]	641803	09/23/08	7.24	21.9	599	133	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803	641803	10/22/08	7.36	21.3	650	144	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803	641803	02/10/09	7.42	17.9	475	141	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803	641803	04/29/09	7.52	21.9	506	211	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 803	641803	08/03/09	7.39	24.2	674	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 596 [2]	641803	10/19/09	6.89	23.3	1360	590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS 596	641803	11/05/09	6.79	21.9	1418	540	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	02/04/08	7.40	21.0	435	4.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	05/07/08	7.18	22.2	415	5.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	07/17/08	7.28	23.0	446	7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	10/27/08	7.38	21.4	434	15.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	02/10/09	7.51	20.7	322	5.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	04/16/09	7.48	22.0	361	4.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	07/13/09	7.34	22.6	420	3.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ROGERS E	216018	10/06/09	7.31	22.3	407	5.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	02/05/08	7.73	18.2	445	263	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	05/15/08	7.23	25.9	965	265	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	07/30/08	6.99	22.1	999	243	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	10/20/08	7.04	22.0	995	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	02/12/09	6.94	20.9	748	254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	04/21/09	7.18	22.3	759	227	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	08/03/09	7.05	22.9	1029	221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RUIZ	531770	10/28/09	7.09	20.6	920	227	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ	210865	02/08/08	7.52	21.5	506	158	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	04/21/08	7.23	21.7	563	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	05/19/08	7.38	22.4	629	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	06/23/08	7.02	22.1	674	129	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	07/29/08	7.25	22.4	955	245	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	08/28/08	M	22.3	669	131	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	09/23/08	7.27	22.2	607	124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	10/22/08	7.31	22.0	653	135	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	11/19/08	7.38	21.1	612	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	12/17/08	6.78	21.6	472	144	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	01/29/09	7.08	22.0	475	124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ [1]	210865	02/23/09	7.33	22.1	610	123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ	210865	04/17/09	7.46	22.2	520	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ	210865	07/10/09	7.52	22.8	651	116	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ DUP	210865	07/10/09	7.52	22.8	651	117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SCHWARTZ	210865	10/06/09	7.27	22.5	613	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SRC	211345	04/23/08	7.57	25.8	380	19	10	0.2	3.61	3.61	<0.01	25.8	16.3	2.1	48.2	174	<2	<2	174	230	NA	NA	NA	NA	NA
SRC	211345	08/05/08	7.40	27.2	452	15.4	10.4	0.2	3.74	3.74	<0.01	26.8	17.8	2.0	44.6	173	<2	<2	173	250	238	1.05	4.3	4.8	5.5
SWAN	NR	02/13/08	7.28	20.7	467	24.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWAN	NR	05/14/08	7.24	21.2	479	23.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWAN	NR	07/24/08	7.35	22.4	506	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWAN	NR	10/16/08	7.32	20.7	488	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWAN	NR	01/20/09	7.05	20.4	391	19.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
SWAN	NR	04/07/09	7.21	21.5	447	19.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWAN	NR	07/08/09	7.18	23.1	473	18.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWAN	NR	10/05/09	7.18	21.4	496	19.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-02A	522574	03/04/08	8.67	22.6	302	12.3	8.6	0.3	<0.02	0.02	0.02	12.6	5.8	2.2	58.0	146	9	<2	155	190	196	0.97	3.6	3.7	1.4
TM-02A	522574	05/23/08	7.75	22.9	321	14.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-02A	522574	08/15/08	7.84	26.4	369	14.4	8.2	0.2	0.25	0.3	<0.01	14.7	5.2	2.4	60.2	143	8	<2	151	190	200	0.95	3.5	3.8	4.1
TM-02A	522574	10/30/08	8.07	23.9	375	21.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-02A	522574	02/24/09	8.10	24.8	340	20.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-02A	522574	05/06/09	8.06	26.7	320	18.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-02A	522574	08/12/09	8.34	26.9	398	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-02A	522574	11/04/09	8.16	26.3	381	21.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03	522575	05/20/08	7.51	22.2	778	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03	522575	08/06/08	7.08	21.6	828	97	40.7	0.2	7.68	7.68	<0.01	94.3	36.6	3.5	27.8	221	<2	<2	221	510	467	1.09	8.1	9.0	5.3
TM-03	522575	11/12/08	7.47	20.5	590	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03	522575	02/26/09	7.21	21.8	737	107	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03 DUP	522575	02/26/09	7.21	21.8	737	102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03	522575	05/13/09	7.47	22.2	695	109	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03	522575	08/18/09	7.48	22.4	822	98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-03	522575	11/10/09	7.55	21.8	761	106	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER	522695	02/27/08	7.44	19.6	457	13.9	7.1	0.3	0.96	0.96	<0.01	42.2	19	1.7	54.3	218	<2	<2	218	310	274	1.13	4.9	6.1	10.9
TM-06 MILLER	522695	05/20/08	7.50	20.7	506	32.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER	522695	08/04/08	7.41	20.7	529	31.3	18	0.7	0.89	0.89	<0.01	37.8	19.5	1.9	52.1	210	<2	<2	210	300	291	1.03	5.4	5.8	3.6
TM-06 MILLER	522695	10/29/08	7.55	20.2	531	34.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER	522695	02/26/09	7.18	20.4	574	32.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER	522695	05/13/09	7.35	20.9	465	30.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER	522695	08/18/09	7.50	20.9	560	30.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER DUP	522695	08/18/09	7.50	20.9	560	29.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-06 MILLER	522695	11/12/09	7.53	20.4	530	31.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-07	522576	03/06/08	7.54	20.8	726	22.5	9	0.2	3.04	3.04	<0.01	49	15.8	2.0	22.6	133	9	<2	142	220	223	0.10	3.7	4.7	11.9
TM-07	522576	05/22/08	6.96	20.1	385	22.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-07	522576	08/06/08	7.04	22.8	519	22.2	8.9	0.2	2.52	2.52	<0.01	45.8	14.7	1.9	20.5	157	<2	<2	159	240	220	1.09	4.0	4.4	4.8
TM-07	522576	11/04/08	7.76	20.6	347	31.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-07	522576	02/20/09	7.77	19.9	376	22.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-07	522576	05/13/09	7.30	22.9	559	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-07	522576	08/17/09	7.60	22.6	442	134	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-07	522576	11/03/09	7.85	21.8	441	134	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-08 SWAN	522817	02/13/08	7.63	24.1	511	24.1	32.1	0.3	5.30	5.30	<0.01	43.4	21.4	4.9	35.5	204	<2	< 2	204	310	296	1.1	5.6	5.6	0.0
TM-08 SWAN	522817	05/14/08	7.44	24.4	480	12.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-08 SWAN	522817	07/23/08	7.76	28.1	522	12.6	14.8	0.3	2.86	2.86	<0.01	<0.02	<0.02	1.1	128	204	11	<2	215	310	303	1.02	5.2	5.6	3.7
TM-15 MILLER	522699	02/27/08	7.66	21.9	344	14	7.1	0.4	1.56	1.56	<0.01	32.9	18	2.0	32.4	181	2	<2	183	220	224	0.98	4.2	4.6	4.5
TM-15 MILLER	522699	05/23/08	7.54	22.1	371	14.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-15 MILLER	522699	08/05/08	7.42	23.3	413	13.7	7	0.3	1.99	1.99	<0.01	29.8	18.9	2.0	32.0	173	<2	<2	174	210	216	0.97	4.1	4.5	4.7
TM-15 MILLER	522699	10/28/08	7.63	22.6	387	18.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-15 MILLER DUP	522699	10/28/08	7.63	22.6	387	18.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-15 MILLER	522699	02/26/09	7.57	22.0	373	14.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-15 MILLER	522699	05/13/09	7.61	23.1	344	13.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-15 MILLER	522699	08/17/09	7.73	23.2	398	14.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-15 MILLER	522699	11/03/09	7.73	23.4	414	14.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-16	522578	03/05/08	7.17	20.6	1351	497	28.9	<0.1	6.80	6.90	<0.01	225	51.7	13.4	30.7	205	<2	<2	205	1030	1000	1.03	15.8	17.2	4.2
TM-16	522578	05/22/08	7.05	20.5	1304	522	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-16	522578	08/06/08	6.67	20.9	1410	466	28.1	<0.1	8.07	8.07	<0.01	215	52.7	13.3	30.0	191	<2	<2	191	1070	955	1.12	15.0	16.7	5.4
TM-16	522578	11/05/08	7.14	19.8	1162	547	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-16	522578	02/20/09	6.90	21.1	1292	492	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-16	522578	05/13/09	6.93	21.1	1179	484	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-16	522578	08/19/09	7.08	21.2	1354	468	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-16	522578	11/10/09	7.02	21.0	1310	505	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-19A	522581	03/06/08	8.02	22.2	240	56.1	15.4	0.1	0.26	0.26	<0.01	37.9	11.6	3.0	57.7	119	19	<2	138	280	273	1.03	4.3	5.4	11.3
TM-19A	522581	05/22/08	7.36	24.0	501	64.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-19A	522581	08/06/08	7.32	22.6	494	55.3	15.4	0.1	0.09	0.09	<0.01	37.3	10.8	2.9	53.0	153	5	<2	158	270	272	0.99	4.7	5.1	4.1
TM-19A	522581	11/18/08	7.79	24.3	365	66.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-19A	522581	03/03/09	7.41	24.5	489	66.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-19A	522581	04/22/09	7.44	24.3	494	62.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-19A	522581	08/12/09	7.61	24.4	554	61.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-19A	522581	11/04/09	7.47	24.2	522	63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42	562554	03/05/08	7.10	20.8	1342	492	27	0.2	6.55	6.55	<0.01	185	55.8	10.4	37.9	186	<2	<2	186	980	939	1.04	15.1	15.8	2.3
TM-42	562554	05/22/08	7.05	21.4	1270	483	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42	562554	08/06/08	6.69	22.0	1388	467	27.3	0.2	7.20	7.20	<0.01	191	60.7	10.1	38.7	208	<2	<2	208	1010	952	1.04	15.3	16.5	3.8
TM-42	562554	11/06/08	6.90	21.0	1025	477	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42	562554	02/18/09	6.72	22.3	1245	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42	562554	05/07/09	6.88	24.5	1155	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42 DUP	562554	05/07/09	6.88	24.5	1155	445	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42	562554	08/18/09	7.04	24.4	1336	428	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-42	562554	11/03/09	7.07	23.1	1266	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-43	564729	03/03/08	8.57	21.0	341	2.1	7.7	0.3	0.04	0.04	<0.01	10.1	5.7	2.2	79.4	197	20	<2	217	250	246	1.02	4.6	4.5	-1.1
TM-43	564729	08/04/08	8.14	25.7	436	<5	12	<1	0.25	0.25	<0.01	10.4	5.8	2.0	79.7	174	12	<2	186	270	227	1.19	4.0	4.5	5.9
TM-43A	564726	03/03/08	6.17	19.9	2788	1420	31	<0.2	0.99	0.99	<0.01	570	181	4.5	42.1	713	<2	<2	713	3000	2680	1.19	45.0	45.0	0.3
TM-43A	564726	08/04/08	6.03	21.6	3149	1320	30	<0.2	1.31	1.31	<0.01	577	188	4.7	40.5	658	<2	<2	658	2950	2560	1.15	41.8	46.2	5.0
TM-43B	565004	03/03/08	6.79	20.6	514	0.7	5	<0.1	0.05	0.06	0.01	54.6	23.8	2.9	47.9	338	<2	<2	338	350	338	1.04	6.9	6.8	-0.7
TM-43B	565004	08/05/08	6.89	21.0	507	31.8	4.7	<0.1	0.03	0.03	<0.01	47.5	21.5	2.6	44.9	231	<2	<2	231	300	292	1.03	5.4	6.1	6.1
TM-43B DUP	565004	08/05/08	6.89	21.0	507	32.5	4.7	<0.1	0.11	0.11	<0.01	47.9	21.7	2.5	44.9	234	<2	<2	234	310	295	1.05	5.5	6.2	6.0
TVI 236	802236	03/20/08	7.48	20.0	488	31.3	26	0.1	3.90	3.93	0.03	70.5	9.3	1.9	25.6	178	<2	<2	178	310	289	1.07	5.2	5.4	1.9
TVI 236	802236	05/07/08	7.13	20.4	494	32.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 236	802236	07/15/08	7.39	21.9	532	37.6	23.5	0.2	3.46	3.46	<0.01	70.4	9.3	1.8	26.3	161	11	<2	173	310	292	1.06	5.1	5.4	2.9
TVI 236	802236	10/15/08	7.45	22.3	490	36.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 236	802236	02/11/09	7.32	20.1	391	27.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 236	802236	04/17/09	7.36	19.3	418	28.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 236 DUP	802236	04/17/09	7.36	19.3	418	28.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 236	802236	07/21/09	7.59	22.9	484	31.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 236	802236	10/19/09	7.31	22.1	513	33.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 875	568875	02/21/08	7.28	21.1	739	244	20.1	0.2	2.99	2.99	<0.01	120	16.1	2.9	41.1	161	11	<2	172	630	565	1.12	9.3	9.2	-0.5
TVI 875	568875	05/07/08	7.09	21.2	833	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 875	568875	07/15/08	7.27	22.4	925	274	20.2	0.2	3.00	3.00	<0.01	131	17.4	2.8	39.6	148	11	<2	160	640	598	1.07	9.7	9.7	0.0
TVI 875	568875	10/15/08	7.26	22.1	878	245	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 875	568875	02/11/09	7.20	20.7	738	312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 875	568875	04/17/09	7.31	21.5	690	251	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2
Compilation of Analytical Results
For Inorganic Analytes and Field Parameters

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temp (deg C)	SC (µS/cm)	Sulfate, dissolved	Chloride, dissolved	Fluoride, dissolved	Nitrate, dissolved	Nitrate/Nitrite, dissolved	Nitrite, dissolved	Calcium, dissolved	Magnesium, dissolved	Potassium, dissolved	Sodium, dissolved	Bicarbonate as CaCO3	Carbonate as CaCO3	Hydroxide as CaCO3	Total Alkalinity	Residue, Filterable (TDS) @ 180ºC	TDS (calculated)	TDS Ratio (measured/ calculated)	Sum of Anions (meq/L)	Sum of Cations (meq/L)	Cation/Anion Balance (%)
TVI 875	568875	07/21/09	7.47	22.2	812	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TVI 875	568875	10/19/09	7.23	21.9	822	247	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WALKER	200393	02/13/08	7.05	20.2	650	20	4	0.2	2.26	2.26	<0.01	117	14.4	3.6	14.3	355	<2	<2	355	440	396	1.11	7.8	7.7	-0.6
WALKER	200393	07/23/08	7.25	20.7	740	45.4	37.8	0.3	7.24	7.24	<0.01	89	27.9	2.9	28.6	250	7	<2	257	450	421	1.07	7.6	8.0	2.6
WEED	544535	02/14/08	7.74	21.7	323	11.1	9	NA	1.72	1.72	<0.02	35.6	14.5	2.2	30.0	162	5	<2	168	230	212	1.08	3.9	4.3	4.9
WEED	544535	05/15/08	7.22	22.7	365	12.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEED	544535	07/30/08	7.42	32.0	407	11.5	10.1	0.3	1.92	1.92	<0.01	34.1	13.6	2.2	29.4	163	2	<2	165	230	209	1.10	3.9	4.1	2.5
WEED	544535	10/20/08	8.10	31.6	405	10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEED	544535	02/13/09	7.66	21.0	303	12.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEED	544535	04/22/09	7.46	22.2	368	11.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEED	544535	07/16/09	7.50	21.9	365	10.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEED	544535	10/20/09	7.34	21.6	381	12.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEISKOPF	641802	02/15/08	7.48	20.0	1072	500	33.1	0.2	4.74	4.74	<0.01	218	31.4	4.3	35.7	177	<2	<2	177	1010	950	1.06	15.3	15.2	-0.3
WEISKOPF	641802	05/07/08	7.10	21.8	1251	483	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEISKOPF	641802	07/16/08	7.07	22.2	1399	560	26	0.1	4.29	4.29	<0.01	248	34.3	4.4	38.6	170	3	<2	173	1060	1040	1.0	16.3	17.0	2.1
WEISKOPF	641802	10/28/08	6.98	20.8	1401	602	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEISKOPF	641802	01/29/09	6.79	20.7	1014	503	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEISKOPF	641802	04/15/09	7.53	21.1	1164	503	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEISKOPF	641802	07/15/09	7.84	22.1	1317	486	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WEISKOPF	641802	10/15/09	6.89	21.4	1216	484	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	02/04/08	7.24	19.7	392	5.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	05/06/08	7.26	21.2	404	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	07/16/08	6.92	22.9	441	6.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	10/28/08	7.40	21.2	415	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	02/10/09	7.50	20.4	317	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	04/16/09	7.47	21.7	352	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	07/14/09	7.36	22.9	418	4.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZANDER	205126	10/13/09	7.41	21.7	407	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

All units are in milligrams per liter (mg/L) unless otherwise noted
deg C = degrees Celsius
meq/l = milliequivalent per liter
M = pH Meter Malfunction
NA = Not Analyzed
NR = No Record
ND = No Data
SC = Specific Conductance
SU = Standard Units
TDS = Total Dissolved Solids
µS/cm = microsiemens per centimeter

[1] ***Verified drinking water supply well, sample collected for sulfate trend analysis and interim action evaluation***

[2] ***Well Previousely identified as ROGERS 803***

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
ANDERSON	613396	601134.729	3468816.065	03/20/08	4580.34	145.46	4434.88
ANDERSON	613396	601134.729	3468816.065	05/05/08	4580.34	145.84	4434.50
ANDERSON	613396	601134.729	3468816.065	07/14/08	4580.34	146.16	4434.18
ANDERSON	613396	601134.729	3468816.065	10/15/08	4580.34	146.21	4434.13
ANDERSON	613396	601134.729	3468816.065	01/27/09	4580.34	145.97	4434.37
ANDERSON	613396	601134.729	3468816.065	04/14/09	4580.34	146.21	4434.13
ANDERSON	613396	601134.729	3468816.065	07/14/09	4580.34	146.88	4433.46
ANDERSON	613396	601134.729	3468816.065	10/12/09	4580.34	147.31	4433.03
AWC-02	616586	598907.911	3468549.357	08/27/08	4547.64	121.12	4426.52
AWC-02 [2]	616586	598907.911	3468549.357	04/08/08	4547.64	116	4431.64
AWC-02 [3]	616586	598907.911	3468549.357	10/23/08	4547.64	115	4432.64
AWC-02 [3]	616586	598907.911	3468549.357	04/22/09	4547.64	118	4429.64
AWC-02 [3]	616586	598907.911	3468549.357	Oct-09	4547.64	117	4430.64
AWC-03	616585	599090.322	3468681.898	08/27/08	4539.52	119.40	4420.12
AWC-03 [2]	616585	599090.322	3468681.898	04/08/08	4539.52	112	4427.52
AWC-03 [3]	616585	599090.322	3468681.898	10/23/08	4539.52	106	4433.52
AWC-03 [3]	616585	599090.322	3468681.898	04/22/09	4539.52	114	4425.52
AWC-03 [3]	616585	599090.322	3468681.898	Oct-09	4539.52	116	4423.52
AWC-04	616584	598949.929	3468717.084	08/18/08	4540.48	112.56	4427.92
AWC-04 [2]	616584	598949.929	3468717.084	04/08/08	4540.48	108	4432.48
AWC-04 [3]	616584	598949.929	3468717.084	10/23/08	4540.48	111.31	4429.17
AWC-04 [3]	616584	598949.929	3468717.084	04/22/09	4540.48	110	4430.48
AWC-04 [3]	616584	598949.929	3468717.084	Oct-09	4540.48	110	4430.48
AWC-05	590620	599269.904	3468541.692	08/27/08	4542.51	299.65	4242.86
AWC-05 [2]	590620	599269.904	3468541.692	04/08/08	4542.51	284	4258.51
AWC-05 [3]	590620	599269.904	3468541.692	10/23/08	4542.51	284	4258.51
AWC-05 [3]	590620	599269.904	3468541.692	04/22/09	4542.51	286	4256.51
AWC-05 [3]	590620	599269.904	3468541.692	06/03/09	4542.51	125	4417.51
AWC-05 [3]	590620	599269.904	3468541.692	Oct-09	4542.51	289	4253.51
BANKS 987	647987	606981.921	3469206.175	02/27/08	4648.18	208.00	4440.18
BANKS 987	647987	606981.921	3469206.175	05/12/08	4648.18	216.30	4431.88
BANKS 987	647987	606981.921	3469206.175	07/21/08	4648.18	228.95	4419.23
BANKS 987	647987	606981.921	3469206.175	10/13/08	4648.18	228.20	4419.98
BANKS 987	647987	606981.921	3469206.175	01/21/09	4648.18	206.64	4441.54
BANKS 987	647987	606981.921	3469206.175	04/08/09	4648.18	205.50	4442.68
BANKS 987	647987	606981.921	3469206.175	07/09/09	4648.18	235.68	4412.50
BANKS 987	647987	606981.921	3469206.175	10/07/09	4648.18	236.71	4411.47
BARTON 919	644919	606243.850	3469076.689	05/12/08	4692.36	113.71	4578.65
BARTON 919	644919	606243.850	3469076.689	07/23/08	4692.36	113.56	4578.80
BARTON 919	644919	606243.850	3469076.689	10/16/08	4692.36	113.20	4579.16
BARTON 919	644919	606243.850	3469076.689	03/11/09	4692.36	112.92	4579.44
BARTON 919	644919	606243.850	3469076.689	04/10/09	4692.36	112.89	4579.47
BARTON 919	644919	606243.850	3469076.689	07/07/09	4692.36	112.86	4579.50
BF-01	539783	604169.077	3472151.593	03/04/08	4835.23	348.99	4486.24
BF-01	539783	604169.077	3472151.593	05/23/08	4835.23	348.80	4486.43
BF-01	539783	604169.077	3472151.593	08/05/08	4835.23	348.66	4486.57
BF-01	539783	604169.077	3472151.593	11/05/08	4835.23	348.94	4486.29
BF-01	539783	604169.077	3472151.593	02/20/09	4835.23	348.78	4486.45
BF-01	539783	604169.077	3472151.593	05/06/09	4835.23	348.73	4486.50
BF-01	539783	604169.077	3472151.593	08/17/09	4835.23	348.73	4486.50
BF-01	539783	604169.077	3472151.593	11/04/09	4835.23	348.65	4486.58

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
BIMA	577927	606001.245	3471852.804	05/13/08	4802.05	367.31	4434.74
BIMA	577927	606001.245	3471852.804	08/18/08	4802.05	370.24	4431.81
BIMA	577927	606001.245	3471852.804	10/23/08	4802.05	353.96	4448.09
BIMA	577927	606001.245	3471852.804	01/20/09	4802.05	353.07	4448.98
BIMA	577927	606001.245	3471852.804	04/07/09	4802.05	357.76	4444.29
BIMA	577927	606001.245	3471852.804	07/08/09	4802.05	365.44	4436.61
BIMA	577927	606001.245	3471852.804	10/05/09	4802.05	370.11	4431.94
BMO-2008-1G	909474	606467.681	3471723.644	08/27/08	4805.10	62.05	4743.05
BMO-2008-1G	909474	606467.681	3471723.644	11/11/08	4805.10	60.95	4744.15
BMO-2008-1G	909474	606467.681	3471723.644	02/25/09	4805.10	61.43	4743.67
BMO-2008-1G	909474	606467.681	3471723.644	04/28/09	4805.10	62.01	4743.09
BMO-2008-1G	909474	606467.681	3471723.644	08/04/09	4805.10	62.96	4742.14
BMO-2008-1G	909474	606467.681	3471723.644	10/27/09	4805.10	63.61	4741.49
BMO-2008-3B	909147	602012.923	3467919.582	07/18/08	4583.97	138.05	4445.92
BMO-2008-3B	909147	602012.923	3467919.582	11/04/08	4583.97	137.95	4446.02
BMO-2008-3B	909147	602012.923	3467919.582	02/19/09	4583.97	138.19	4445.78
BMO-2008-3B	909147	602012.923	3467919.582	05/11/09	4583.97	138.46	4445.51
BMO-2008-3B	909147	602012.923	3467919.582	08/06/09	4583.97	139.02	4444.95
BMO-2008-3B	909147	602012.923	3467919.582	10/26/09	4583.97	139.60	4444.37
BMO-2008-4B	910096	601099.405	3468383.430	12/11/08	4573.17	130.77	4442.40
BMO-2008-4B	910096	601099.405	3468383.430	02/18/09	4573.17	130.58	4442.59
BMO-2008-4B	910096	601099.405	3468383.430	04/30/09	4573.17	131.24	4441.93
BMO-2008-4B	910096	601099.405	3468383.430	08/06/09	4573.17	131.96	4441.21
BMO-2008-4B	910096	601099.405	3468383.430	10/27/09	4573.17	132.04	4441.13
BMO-2008-5B	909653	600438.159	3468994.715	09/30/08	4585.10	145.10	4440.00
BMO-2008-5B	909653	600438.159	3468994.715	02/18/09	4585.10	144.35	4440.75
BMO-2008-5B	909653	600438.159	3468994.715	04/27/09	4585.10	144.78	4440.32
BMO-2008-5B	909653	600438.159	3468994.715	08/04/09	4585.10	145.36	4439.74
BMO-2008-5B	909653	600438.159	3468994.715	10/29/09	4585.10	145.88	4439.22
BMO-2008-5M	909552	600445.071	3468994.282	10/02/08	4585.02	146.65	4438.37
BMO-2008-5M	909552	600445.071	3468994.282	02/18/09	4585.02	145.97	4439.05
BMO-2008-5M	909552	600445.071	3468994.282	04/27/09	4585.02	146.46	4438.56
BMO-2008-5M	909552	600445.071	3468994.282	08/04/09	4585.02	147.13	4437.89
BMO-2008-5M	909552	600445.071	3468994.282	10/29/09	4585.02	147.68	4437.34
BMO-2008-6B	909146	600366.523	3469820.644	07/16/08	4627.44	190.13	4437.31
BMO-2008-6B	909146	600366.523	3469820.644	11/04/08	4627.44	190.23	4437.21
BMO-2008-6B	909146	600366.523	3469820.644	02/19/09	4627.44	189.71	4437.73
BMO-2008-6B	909146	600366.523	3469820.644	04/27/09	4627.44	189.99	4437.45
BMO-2008-6B	909146	600366.523	3469820.644	08/04/09	4627.44	190.80	4436.64
BMO-2008-6B	909146	600366.523	3469820.644	10/26/09	4627.44	191.04	4436.40
BMO-2008-6M	909019	600367.943	3469813.885	07/10/08	4626.90	191.63	4435.27
BMO-2008-6M	909019	600367.943	3469813.885	11/04/08	4626.90	190.25	4436.65
BMO-2008-6M	909019	600367.943	3469813.885	02/20/09	4626.90	190.70	4436.20
BMO-2008-6M	909019	600367.943	3469813.885	04/28/09	4626.90	190.98	4435.92
BMO-2008-6M	909019	600367.943	3469813.885	08/04/09	4626.90	191.77	4435.13
BMO-2008-6M	909019	600367.943	3469813.885	10/26/09	4626.90	192.14	4434.76
BMO-2008-7M	908794	603099.165	3470029.283	07/14/08	4688.33	238.31	4450.02
BMO-2008-7M	908794	603099.165	3470029.283	11/06/08	4688.33	239.69	4448.64
BMO-2008-7M	908794	603099.165	3470029.283	02/18/09	4688.33	238.90	4449.43
BMO-2008-7M	908794	603099.165	3470029.283	05/11/09	4688.33	239.03	4449.30
BMO-2008-7M	908794	603099.165	3470029.283	08/06/09	4688.33	239.17	4449.16
BMO-2008-7M	908794	603099.165	3470029.283	10/27/09	4688.33	239.55	4448.78

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
BMO-2008-8B	910097	604171.347	3471141.719	12/05/08	4753.25	297.94	4455.31
BMO-2008-8B	910097	604171.347	3471141.719	02/19/09	4753.25	297.63	4455.62
BMO-2008-8B	910097	604171.347	3471141.719	05/05/09	4753.25	297.37	4455.88
BMO-2008-8B	910097	604171.347	3471141.719	08/10/09	4753.25	297.53	4455.72
BMO-2008-8B	910097	604171.347	3471141.719	11/09/09	4753.25	297.85	4455.40
BMO-2008-8M	909711	604167.912	3471127.902	12/09/08	4752.45	299.79	4452.66
BMO-2008-8M	909711	604167.912	3471127.902	02/19/09	4752.45	298.32	4454.13
BMO-2008-8M	909711	604167.912	3471127.902	05/05/09	4752.45	298.27	4454.18
BMO-2008-8M	909711	604167.912	3471127.902	08/10/09	4752.45	298.57	4453.88
BMO-2008-8M	909711	604167.912	3471127.902	11/05/09	4752.45	298.81	4453.64
BMO-2008-9M	909255	604668.669	3471121.675	08/08/08	4762.61	287.17	4475.44
BMO-2008-9M	909255	604668.669	3471121.675	11/05/08	4762.61	287.65	4474.96
BMO-2008-9M	909255	604668.669	3471121.675	02/26/09	4762.61	285.65	4476.96
BMO-2008-9M	909255	604668.669	3471121.675	05/12/09	4762.61	285.28	4477.33
BMO-2008-9M	909255	604668.669	3471121.675	08/17/09	4762.61	286.09	4476.52
BMO-2008-9M	909255	604668.669	3471121.675	11/03/09	4762.61	286.55	4476.06
BMO-2008-10GU	909272	605267.551	3471731.866	08/04/08	4793.45	299.28	4494.17
BMO-2008-10GU	909272	605267.551	3471731.866	11/05/08	4793.45	295.89	4497.56
BMO-2008-10GU	909272	605267.551	3471731.866	02/25/09	4793.45	289.84	4503.61
BMO-2008-10GU	909272	605267.551	3471731.866	05/06/09	4793.45	289.35	4504.10
BMO-2008-10GU	909272	605267.551	3471731.866	08/11/09	4793.45	289.09	4504.36
BMO-2008-10GU	909272	605267.551	3471731.866	11/02/09	4793.45	289.77	4503.68
BMO-2008-10GL	909435	605264.072	3471702.043	08/20/08	4792.21	521.75	4270.46
BMO-2008-10GL	909435	605264.072	3471702.043	11/05/08	4792.21	520.50	4271.71
BMO-2008-10GL	909435	605264.072	3471702.043	02/25/09	4792.21	516.72	4275.49
BMO-2008-10GL	909435	605264.072	3471702.043	05/12/09	4792.21	514.68	4277.53
BMO-2008-10GL	909435	605264.072	3471702.043	08/11/09	4792.21	513.23	4278.98
BMO-2008-10GL	909435	605264.072	3471702.043	11/02/09	4792.21	509.43	4282.78
BMO-2008-11G	909434	603800.995	3472626.482	08/22/08	4844.67	577.76	4266.91
BMO-2008-11G	909434	603800.995	3472626.482	11/12/08	4844.67	576.80	4267.87
BMO-2008-11G	909434	603800.995	3472626.482	02/26/09	4844.67	575.91	4268.76
BMO-2008-11G	909434	603800.995	3472626.482	04/08/09	4844.67	575.46	4269.21
BMO-2008-11G	909434	603800.995	3472626.482	08/12/09	4844.67	574.84	4269.83
BMO-2008-11G	909434	603800.995	3472626.482	11/09/09	4844.67	573.41	4271.26
BMO-2008-13B	909551	601657.612	3470076.358	10/03/08	4649.21	206.42	4442.79
BMO-2008-13B	909551	601657.612	3470076.358	02/17/09	4649.21	206.11	4443.10
BMO-2008-13B	909551	601657.612	3470076.358	05/06/09	4649.21	206.32	4442.89
BMO-2008-13B	909551	601657.612	3470076.358	08/05/09	4649.21	206.79	4442.42
BMO-2008-13B	909551	601657.612	3470076.358	10/28/09	4649.21	207.08	4442.13
BMO-2008-13M	909760	601650.495	3470040.455	12/03/08	4647.15	206.00	4441.15
BMO-2008-13M	909760	601650.495	3470040.455	02/17/09	4647.15	208.74	4438.41
BMO-2008-13M	909760	601650.495	3470040.455	04/29/09	4647.15	208.53	4438.62
BMO-2008-13M	909760	601650.495	3470040.455	08/05/09	4647.15	208.85	4438.30
BMO-2008-13M	909760	601650.495	3470040.455	10/28/09	4647.15	208.91	4438.24
BURKE	212268	602230.087	3473029.816	04/22/08	4856.30	606.55	4249.75
BURKE	212268	602230.087	3473029.816	08/05/08	4856.30	605.86	4250.44
BURKE	212268	602230.087	3473029.816	10/28/08	4856.30	604.88	4251.42
BURKE	212268	602230.087	3473029.816	02/19/09	4856.30	603.91	4252.39
BURKE	212268	602230.087	3473029.816	04/28/09	4856.30	603.70	4252.60
BURKE	212268	602230.087	3473029.816	08/19/09	4856.30	602.66	4253.64

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
COB MW-1	903992	603153.259	3469889.889	02/22/08	4683.26	232.47	4450.79
COB MW-1	903992	603153.259	3469889.889	05/20/08	4683.26	233.12	4450.14
COB MW-1	903992	603153.259	3469889.889	07/30/08	4683.26	233.37	4449.89
COB MW-1	903992	603153.259	3469889.889	10/23/08	4683.26	233.62	4449.64
COB MW-1	903992	603153.259	3469889.889	02/12/09	4683.26	234.05	4449.21
COB MW-1	903992	603153.259	3469889.889	04/21/09	4683.26	234.99	4448.27
COB MW-1	903992	603153.259	3469889.889	07/22/09	4683.26	234.34	4448.92
COB MW-1	903992	603153.259	3469889.889	10/22/09	4683.26	234.69	4448.57
COB MW-2	903984	600973.257	3468114.836	02/22/08	4566.21	122.85	4443.36
COB MW-2	903984	600973.257	3468114.836	05/20/08	4566.21	123.00	4443.21
COB MW-2	903984	600973.257	3468114.836	07/30/08	4566.21	123.53	4442.68
COB MW-2	903984	600973.257	3468114.836	10/23/08	4566.21	124.02	4442.19
COB MW-2	903984	600973.257	3468114.836	02/12/09	4566.21	123.39	4442.82
COB MW-2	903984	600973.257	3468114.836	04/23/09	4566.21	124.16	4442.05
COB MW-2	903984	600973.257	3468114.836	07/22/09	4566.21	124.91	4441.30
COB MW-2	903984	600973.257	3468114.836	10/22/09	4566.21	125.33	4440.88
COB MW-3	906823	599169.225	3468726.000	02/28/08	4538.63	120.84	4417.79
COB MW-3	906823	599169.225	3468726.000	05/20/08	4538.63	125.00	4413.63
COB MW-3	906823	599169.225	3468726.000	07/30/08	4538.63	118.50	4420.13
COB MW-3	906823	599169.225	3468726.000	10/23/08	4538.63	117.93	4420.70
COB MW-3	906823	599169.225	3468726.000	02/12/09	4538.63	110.91	4427.72
COB MW-3	906823	599169.225	3468726.000	04/23/09	4538.63	125.13	4413.50
COB MW-3	906823	599169.225	3468726.000	07/22/09	4538.63	124.09	4414.54
COB MW-3	906823	599169.225	3468726.000	10/22/09	4538.63	118.03	4420.60
COB WL	593116	606357.506	3472502.012	02/22/08	4832.06	56.50	4775.56
COB WL	593116	606357.506	3472502.012	05/20/08	4832.06	57.50	4774.56
COB WL	593116	606357.506	3472502.012	07/30/08	4832.06	58.64	4773.42
COB WL	593116	606357.506	3472502.012	10/23/08	4832.06	58.76	4773.30
COB WL	593116	606357.506	3472502.012	02/12/09	4832.06	58.89	4773.17
COB WL	593116	606357.506	3472502.012	04/23/09	4832.06	59.73	4772.33
COB WL	593116	606357.506	3472502.012	07/22/09	4832.06	61.27	4770.79
COB WL	593116	606357.506	3472502.012	10/22/09	4832.06	62.82	4769.24
COLLINS	565260	602551.286	3471341.335	02/12/08	4733.72	289.47	4444.25
COLLINS	565260	602551.286	3471341.335	05/29/08	4733.72	288.53	4445.19
COLLINS	565260	602551.286	3471341.335	07/31/08	4733.72	290.08	4443.64
COLLINS	565260	602551.286	3471341.335	10/20/08	4733.72	290.15	4443.57
COLLINS	565260	602551.286	3471341.335	04/21/09	4733.72	290.66	4443.06
COLLINS	565260	602551.286	3471341.335	07/20/09	4733.72	290.78	4442.94
COLLINS	565260	602551.286	3471341.335	10/20/09	4733.72	290.52	4443.20
COOPER C	637069	601349.987	3468913.011	03/04/08	4595.06	155.08	4439.98
COOPER C	637069	601349.987	3468913.011	05/05/08	4595.06	155.34	4439.72
COOPER C	637069	601349.987	3468913.011	07/15/08	4595.06	156.01	4439.05
COOPER C	637069	601349.987	3468913.011	10/16/08	4595.06	155.85	4439.21
COOPER C	637069	601349.987	3468913.011	01/27/09	4595.06	155.62	4439.44
COOPER C	637069	601349.987	3468913.011	04/14/09	4595.06	155.86	4439.20
COOPER C	637069	601349.987	3468913.011	07/14/09	4595.06	156.50	4438.56
COOPER C	637069	601349.987	3468913.011	10/12/09	4595.06	156.89	4438.17

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
DODSON	644927	605594.560	3469063.772	05/12/08	4686.34	81.38	4604.96
DODSON	644927	605594.560	3469063.772	07/24/08	4686.34	82.20	4604.14
DODSON	644927	605594.560	3469063.772	10/13/08	4686.34	81.82	4604.52
DODSON	644927	605594.560	3469063.772	01/22/09	4686.34	82.33	4604.01
DODSON	644927	605594.560	3469063.772	04/09/09	4686.34	82.84	4603.50
DODSON	644927	605594.560	3469063.772	07/08/09	4686.34	86.88	4599.46
DODSON	644927	605594.560	3469063.772	10/06/09	4686.34	87.27	4599.07
DOUGLASS 791	592791	607632.993	3470222.677	02/13/08	4703.27	22.11	4681.16
DOUGLASS 791	592791	607632.993	3470222.677	05/13/08	4703.27	24.60	4678.67
DOUGLASS 791	592791	607632.993	3470222.677	07/22/08	4703.27	27.00	4676.27
DOUGLASS 791	592791	607632.993	3470222.677	10/16/08	4703.27	23.60	4679.67
DOUGLASS 791	592791	607632.993	3470222.677	01/19/09	4703.27	26.51	4676.76
DOUGLASS 791	592791	607632.993	3470222.677	04/08/09	4703.27	28.53	4674.74
DOUGLASS 791	592791	607632.993	3470222.677	07/07/09	4703.27	31.04	4672.23
DOUGLASS 791	592791	607632.993	3470222.677	10/05/09	4703.27	31.49	4671.78
DOUGLASS 792	592792	607607.541	3469829.115	02/13/08	4681.73	87.76	4593.97
DOUGLASS 792	592792	607607.541	3469829.115	05/13/08	4681.73	87.21	4594.52
DOUGLASS 792	592792	607607.541	3469829.115	07/22/08	4681.73	86.90	4594.83
DOUGLASS 792	592792	607607.541	3469829.115	10/16/08	4681.73	86.45	4595.28
DOUGLASS 792	592792	607607.541	3469829.115	01/20/09	4681.73	86.26	4595.47
DOUGLASS 792	592792	607607.541	3469829.115	04/08/09	4681.73	86.04	4595.69
DOUGLASS 792	592792	607607.541	3469829.115	07/07/09	4681.73	86.16	4595.57
DOUGLASS 792	592792	607607.541	3469829.115	10/05/09	4681.73	86.19	4595.54
EAST	599796	607076.365	3468712.215	02/08/08	4626.01	50.20	4575.81
EAST	599796	607076.365	3468712.215	05/14/08	4626.01	52.45	4573.56
EAST	599796	607076.365	3468712.215	07/23/08	4626.01	52.16	4573.85
EAST	599796	607076.365	3468712.215	10/14/08	4626.01	52.19	4573.82
EAST	599796	607076.365	3468712.215	01/20/09	4626.01	50.52	4575.49
EAST	599796	607076.365	3468712.215	04/08/09	4626.01	51.91	4574.10
EAST	599796	607076.365	3468712.215	07/13/09	4626.01	56.93	4569.08
EAST	599796	607076.365	3468712.215	10/08/09	4626.01	60.95	4565.06
EPPELE 641	805641	607165.354	3469229.942	03/11/08	4642.86	29.52	4613.34
EPPELE 641	805641	607165.354	3469229.942	05/12/08	4642.86	30.64	4612.22
EPPELE 641	805641	607165.354	3469229.942	07/21/08	4642.86	25.59	4617.27
EPPELE 641	805641	607165.354	3469229.942	10/14/08	4642.86	24.53	4618.33
EPPELE 641	805641	607165.354	3469229.942	01/21/09	4642.86	27.35	4615.51
EPPELE 641	805641	607165.354	3469229.942	04/08/09	4642.86	29.08	4613.78
EPPELE 641	805641	607165.354	3469229.942	07/09/09	4642.86	31.51	4611.35
EPPELE 641	805641	607165.354	3469229.942	10/07/09	4642.86	29.92	4612.94
FLEMING	218386	605565.701	3469342.523	02/18/09	4693.68	299.30	4394.38
FLEMING	218386	605565.701	3469342.523	04/08/09	4693.68	301.81	4391.87
FLEMING	218386	605565.701	3469342.523	07/07/09	4693.68	304.60	4389.08
FLEMING	218386	605565.701	3469342.523	10/06/09	4693.68	307.84	4385.84
FULTZ	212447	607153.306	3469063.892	10/22/08	4642.92	40.59	4602.33
FULTZ	212447	607153.306	3469063.892	01/21/09	4642.92	40.66	4602.26
FULTZ	212447	607153.306	3469063.892	04/09/09	4642.92	42.88	4600.04
FULTZ	212447	607153.306	3469063.892	07/13/09	4642.92	54.94	4587.98
FULTZ	212447	607153.306	3469063.892	10/08/09	4642.92	56.16	4586.76

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
GARNER 557	558557	602659.240	3468962.415	02/21/08	4626.44	191.05	4435.39
GARNER 557	558557	602659.240	3468962.415	05/05/08	4626.44	191.28	4435.16
GARNER 557	558557	602659.240	3468962.415	07/15/08	4626.44	191.44	4435.00
GARNER 557	558557	602659.240	3468962.415	10/16/08	4626.44	191.83	4434.61
GARNER 557	558557	602659.240	3468962.415	01/28/09	4626.44	191.92	4434.52
GARNER 557	558557	602659.240	3468962.415	04/15/09	4626.44	192.09	4434.35
GARNER 557	558557	602659.240	3468962.415	07/16/09	4626.44	192.52	4433.92
GARNER 557	558557	602659.240	3468962.415	10/14/09	4626.44	192.82	4433.62
GARNER 635	587635	602665.352	3468967.902	02/04/08	4628.29	193.20	4435.09
GARNER 635	587635	602665.352	3468967.902	05/05/08	4628.29	195.90	4432.39
GARNER 635	587635	602665.352	3468967.902	07/15/08	4628.29	193.58	4434.71
GARNER 635	587635	602665.352	3468967.902	10/15/08	4628.29	194.35	4433.94
GARNER 635	587635	602665.352	3468967.902	01/28/09	4628.29	194.80	4433.49
GARNER 635	587635	602665.352	3468967.902	04/15/09	4628.29	195.54	4432.75
GARNER 635	587635	602665.352	3468967.902	07/16/09	4628.29	194.88	4433.41
GARNER 635	587635	602665.352	3468967.902	10/14/09	4628.29	196.36	4431.93
GGOOSE 547	628547	606256.657	3469820.260	05/21/08	4717.11	220.91	4496.20
GGOOSE 547	628547	606256.657	3469820.260	08/15/08	4717.11	238.48	4478.63
GGOOSE 547	628547	606256.657	3469820.260	10/29/08	4717.11	235.90	4481.21
GGOOSE 547	628547	606256.657	3469820.260	02/24/09	4717.11	236.13	4480.98
GGOOSE 547	628547	606256.657	3469820.260	05/14/09	4717.11	236.17	4480.94
GGOOSE 547	628547	606256.657	3469820.260	08/19/09	4717.11	236.01	4481.10
GGOOSE 547	628547	606256.657	3469820.260	08/19/09	4717.11	236.01	4481.10
GGOOSE 547	628547	606256.657	3469820.260	11/11/09	4717.11	237.66	4479.45
GL-03	539782	604386.940	3473747.943	05/22/08	4924.31	660.15	4264.16
GL-03	539782	604386.940	3473747.943	08/04/08	4924.31	659.79	4264.52
GL-03	539782	604386.940	3473747.943	12/02/08	4924.31	658.25	4266.06
GL-03	539782	604386.940	3473747.943	02/26/09	4924.31	658.62	4265.69
GL-03	539782	604386.940	3473747.943	05/05/09	4924.31	657.23	4267.08
GL-03	539782	604386.940	3473747.943	08/12/09	4924.31	656.56	4267.75
GL-03	539782	604386.940	3473747.943	08/12/09	4924.31	656.56	4267.75
GL-03	539782	604386.940	3473747.943	11/10/09	4924.31	655.31	4269.00
GOAR RANCH	610695	602454.751	3468892.471	02/21/08	4631.13	183.90	4447.23
GOAR RANCH	610695	602454.751	3468892.471	05/05/08	4631.13	188.11	4443.02
GOAR RANCH	610695	602454.751	3468892.471	07/16/08	4631.13	184.41	4446.72
GOAR RANCH	610695	602454.751	3468892.471	10/22/08	4631.13	184.68	4446.45
GOAR RANCH	610695	602454.751	3468892.471	01/27/09	4631.13	184.87	4446.26
GOAR RANCH	610695	602454.751	3468892.471	04/15/09	4631.13	184.96	4446.17
GOAR RANCH	610695	602454.751	3468892.471	07/07/09	4631.13	185.36	4445.77
GOAR RANCH	610695	602454.751	3468892.471	10/12/09	4631.13	185.72	4445.41
HOBAN	805290	601705.848	3468880.329	02/27/08	4597.21	163.05	4434.16
HOBAN	805290	601705.848	3468880.329	05/07/08	4597.21	163.28	4433.93
HOBAN	805290	601705.848	3468880.329	07/14/08	4597.21	163.87	4433.34
HOBAN	805290	601705.848	3468880.329	10/16/08	4597.21	163.95	4433.26
HOBAN	805290	601705.848	3468880.329	01/28/09	4597.21	163.82	4433.39
HOBAN	805290	601705.848	3468880.329	04/15/09	4597.21	164.16	4433.05
HOBAN	805290	601705.848	3468880.329	07/14/09	4597.21	164.59	4432.62
HOBAN	805290	601705.848	3468880.329	10/15/09	4597.21	165.00	4432.21

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
HOWARD	NR	601281.936	3468768.622	03/04/08	4589.70	150.10	4439.60
HOWARD	NR	601281.936	3468768.622	05/08/08	4589.70	150.70	4439.00
HOWARD	NR	601281.936	3468768.622	07/14/08	4589.70	150.91	4438.79
HOWARD	NR	601281.936	3468768.622	10/15/08	4589.70	150.67	4439.03
HOWARD	NR	601281.936	3468768.622	01/28/09	4589.70	150.67	4439.03
HOWARD	NR	601281.936	3468768.622	04/15/09	4589.70	151.15	4438.55
HOWARD	NR	601281.936	3468768.622	07/15/09	4589.70	151.76	4437.94
HOWARD	NR	601281.936	3468768.622	10/12/09	4589.70	152.08	4437.62
KEEFER	209744	599879.175	3468119.015	02/06/08	4572.03	134.67	4437.36
KEEFER	209744	599879.175	3468119.015	05/06/08	4572.03	135.28	4436.75
KEEFER	209744	599879.175	3468119.015	07/16/08	4572.03	136.24	4435.79
KEEFER	209744	599879.175	3468119.015	10/28/08	4572.03	135.87	4436.16
KEEFER	209744	599879.175	3468119.015	01/28/09	4572.03	134.88	4437.15
KEEFER	209744	599879.175	3468119.015	04/16/09	4572.03	135.00	4437.03
KEEFER	209744	599879.175	3468119.015	07/14/09	4572.03	136.07	4435.96
KEEFER	209744	599879.175	3468119.015	10/13/09	4572.03	136.67	4435.36
MCCONNELL 265	539265	601463.094	3468840.139	02/20/08	4600.70	156.15	4444.55
MCCONNELL 265	539265	601463.094	3468840.139	05/06/08	4600.70	156.40	4444.30
MCCONNELL 265	539265	601463.094	3468840.139	07/15/08	4600.70	157.07	4443.63
MCCONNELL 265	539265	601463.094	3468840.139	11/19/08	4600.70	157.17	4443.53
MCCONNELL 265	539265	601463.094	3468840.139	01/28/09	4600.70	156.70	4444.00
MCCONNELL 265	539265	601463.094	3468840.139	04/15/09	4600.70	157.22	4443.48
MCCONNELL 265	539265	601463.094	3468840.139	07/15/09	4600.70	157.59	4443.11
MCCONNELL 265	539265	601463.094	3468840.139	10/12/09	4600.70	158.13	4442.57
METZLER	35-71891	602091.308	3471381.176	03/05/08	4728.53	288.30	4440.23
METZLER	35-71891	602091.308	3471381.176	05/15/08	4728.53	286.53	4442.00
METZLER	35-71891	602091.308	3471381.176	07/31/08	4728.53	286.82	4441.71
METZLER	35-71891	602091.308	3471381.176	10/20/08	4728.53	287.09	4441.44
METZLER	35-71891	602091.308	3471381.176	02/11/09	4728.53	287.74	4440.79
METZLER	35-71891	602091.308	3471381.176	04/20/09	4728.53	287.47	4441.06
METZLER	35-71891	602091.308	3471381.176	07/15/09	4728.53	287.58	4440.95
METZLER	35-71891	602091.308	3471381.176	10/14/09	4728.53	287.99	4440.54
NESS	509127	607866.391	3471419.494	07/24/08	4761.23	557.90	4203.33
NESS	509127	607866.391	3471419.494	10/16/08	4761.23	549.30	4211.93
NESS	509127	607866.391	3471419.494	02/25/09	4761.23	536.40	4224.83
NESS	509127	607866.391	3471419.494	05/11/09	4761.23	544.64	4216.59
NESS	509127	607866.391	3471419.494	08/11/09	4761.23	566.87	4194.36
NESS	509127	607866.391	3471419.494	11/12/09	4761.23	537.34	4223.89
NOTEMAN	212483	606053.800	3471576.400	05/13/08	4800.68	339.77	4460.91
NOTEMAN	212483	606053.800	3471576.400	08/27/08	4800.68	344.34	4456.34
NOTEMAN	212483	606053.800	3471576.400	11/22/08	4800.68	322.26	4478.42
NOTEMAN	212483	606053.800	3471576.400	02/25/09	4800.68	327.54	4473.14
NSD-02	527587	598820.051	3468821.474	10/07/09	4531.38	101.17	4430.21
NSD-03	527586	598070.538	3468694.259	10/07/09	4518.28	85.62	4432.66
NWC-02	562944	600177.435	3467474.673	10/27/08	4600.44	160.51	4439.93
NWC-02 [5]	562944	600177.435	3467474.673	04/29/09	4600.44	160.5	4439.94
NWC-02 [5]	562944	600177.435	3467474.673	09/10/09	4600.44	155	4445.44
NWC-02 [5]	562944	600177.435	3467474.673	10/09/09	4600.44	155	4445.44

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
NWC-03	203321	601153.857	3468350.838	11/03/08	4574.99	131.48	4443.51
NWC-03 [5]	203321	601153.857	3468350.838	04/29/09	4574.99	130	4444.99
NWC-03 [5]	203321	601153.857	3468350.838	09/10/09	4574.99	126	4448.99
NWC-03 [5]	203321	601153.857	3468350.838	10/09/09	4574.99	125	4449.99
NWC-03 CAP	627684	601153	3468350	02/02/09	4572	130.03	4441.97
NWC-03 CAP [6]	627684	601151.704	3468343.653	04/23/09	4572.82	130.62	4442.20
NWC-03 CAP	627684	601151.704	3468343.653	07/21/09	4572.82	131.26	4441.56
NWC-03 CAP	627684	601151.704	3468343.653	10/21/09	4572.82	131.60	4441.22
NWC-04	551849	605829.808	3469071.959	12/02/08	4690.77	352.11	4338.66
NWC-04 [5]	551849	605829.808	3469071.959	04/29/09	4690.77	328	4362.77
NWC-04 [5]	551849	605829.808	3469071.959	09/10/09	4690.77	324	4366.77
NWC-06 [5]	575700	599822.821	3467749.954	04/29/09	4592.50	156	4436.50
NWC-06 [5]	575700	599822.821	3467749.954	09/10/09	4592.50	155	4437.50
NWC-06 [5]	575700	599822.821	3467749.954	10/09/09	4592.50	148	4444.50
OSBORN	643436	607031.823	3470270.548	05/13/08	4711.95	68.65	4643.30
OSBORN	643436	607031.823	3470270.548	08/05/08	4711.95	69.53	4642.42
OSBORN	643436	607031.823	3470270.548	10/16/08	4711.95	69.83	4642.12
OSBORN	643436	607031.823	3470270.548	01/20/09	4711.95	69.23	4642.72
OSBORN	643436	607031.823	3470270.548	04/07/09	4711.95	69.60	4642.35
OSBORN	643436	607031.823	3470270.548	07/08/09	4711.95	96.61	4615.34
OSBORN	643436	607031.823	3470270.548	10/05/09	4711.95	75.09	4636.86
PANAGAKOS	35-76413	605304.234	3469323.140	01/22/09	4691.40	155.28	4536.12
PANAGAKOS	35-76413	605304.234	3469323.140	04/09/09	4691.40	156.15	4535.25
PANAGAKOS	35-76413	605304.234	3469323.140	07/09/09	4691.40	161.61	4529.79
PANAGAKOS	35-76413	605304.234	3469323.140	10/06/09	4691.40	167.20	4524.20
PARRA	576415	602170.716	3471263.549	05/15/08	4727.21	279.78	4447.43
PARRA	576415	602170.716	3471263.549	08/18/08	4727.21	280.06	4447.15
PARRA	576415	602170.716	3471263.549	11/03/08	4727.21	280.39	4446.82
PARRA	576415	602170.716	3471263.549	02/13/09	4727.21	280.75	4446.46
PARRA	576415	602170.716	3471263.549	04/28/09	4727.21	280.88	4446.33
PARRA	576415	602170.716	3471263.549	07/20/09	4727.21	280.99	4446.22
PIONKE	613395	601045.471	3468960.981	07/17/08	4592.13	149.88	4442.25
PIONKE	613395	601045.471	3468960.981	11/03/08	4592.13	150.99	4441.14
PIONKE	613395	601045.471	3468960.981	02/25/09	4592.13	149.68	4442.45
PIONKE	613395	601045.471	3468960.981	04/14/09	4592.13	150.01	4442.12
PIONKE	613395	601045.471	3468960.981	07/13/09	4592.13	150.47	4441.66
PIONKE	613395	601045.471	3468960.981	10/07/09	4592.13	150.96	4441.17
POOL	509518	599683.603	3470013.823	02/20/08	4639.09	204.22	4434.87
POOL	509518	599683.603	3470013.823	05/19/08	4639.09	204.72	4434.37
POOL	509518	599683.603	3470013.823	07/31/08	4639.09	205.56	4433.53
POOL	509518	599683.603	3470013.823	10/21/08	4639.09	205.06	4434.03
POOL	509518	599683.603	3470013.823	02/13/09	4639.09	204.74	4434.35
POOL	509518	599683.603	3470013.823	04/21/09	4639.09	204.87	4434.22
POOL	509518	599683.603	3470013.823	07/20/09	4639.09	205.69	4433.40
POOL	509518	599683.603	3470013.823	10/20/09	4639.09	206.06	4433.03
RAMIREZ	216425	599730.649	3467584.363	10/27/08	4596.61	159.45	4437.16
RAMIREZ	216425	599730.649	3467584.363	01/29/09	4596.61	158.74	4437.87
RAMIREZ	216425	599730.649	3467584.363	04/16/09	4596.61	158.66	4437.95
RAMIREZ	216425	599730.649	3467584.363	07/10/09	4596.61	159.64	4436.97
RAMIREZ	216425	599730.649	3467584.363	10/06/09	4596.61	160.36	4436.25

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
RAY	803772	607083.422	3469195.147	02/15/08	4647.91	40.85	4607.06
RAY	803772	607083.422	3469195.147	05/13/08	4647.91	43.82	4604.09
RAY	803772	607083.422	3469195.147	07/29/08	4647.91	45.25	4602.66
RAY	803772	607083.422	3469195.147	10/22/08	4647.91	44.54	4603.37
RAY	803772	607083.422	3469195.147	01/20/09	4647.91	44.31	4603.60
RAY	803772	607083.422	3469195.147	04/08/09	4647.91	44.68	4603.23
RAY	803772	607083.422	3469195.147	07/09/09	4647.91	48.99	4598.92
RAY	803772	607083.422	3469195.147	10/07/09	4647.91	49.87	4598.04
ROGERS 596	573596	601001.503	3468491.639	11/11/09	4577.35	135.46	4441.89
ROGERS 750 [7]	641750	600977.690	3468417.386	02/07/08	4579.02	129.85	4449.17
ROGERS 750	641750	600977.690	3468417.386	07/29/08	4579.02	131.86	4447.16
ROGERS 750	641750	600977.690	3468417.386	10/22/08	4579.02	132.08	4446.94
ROGERS 750	641750	600977.690	3468417.386	02/10/09	4579.02	130.62	4448.40
ROGERS 750	641750	600977.690	3468417.386	04/29/09	4579.02	131.33	4447.69
ROGERS 750	641750	600977.690	3468417.386	08/03/09	4579.02	135.07	4443.95
ROGERS E	216018	600449.648	3467636.029	07/17/08	4590.66	149.65	4441.01
ROGERS E	216018	600449.648	3467636.029	11/03/08	4590.66	150.15	4440.51
ROGERS E	216018	600449.648	3467636.029	02/10/09	4590.66	149.02	4441.64
ROGERS E	216018	600449.648	3467636.029	04/16/09	4590.66	149.53	4441.13
ROGERS E	216018	600449.648	3467636.029	07/13/09	4590.66	150.31	4440.35
ROGERS E	216018	600449.648	3467636.029	10/06/09	4590.66	150.76	4439.90
RUIZ	531770	602857.357	3471424.219	02/05/08	4735.18	293.29	4441.89
RUIZ	531770	602857.357	3471424.219	05/15/08	4735.18	293.57	4441.61
RUIZ	531770	602857.357	3471424.219	07/30/08	4735.18	293.86	4441.32
RUIZ	531770	602857.357	3471424.219	10/20/08	4735.18	294.18	4441.00
RUIZ	531770	602857.357	3471424.219	02/12/09	4735.18	294.62	4440.56
RUIZ	531770	602857.357	3471424.219	04/21/09	4735.18	294.66	4440.52
RUIZ	531770	602857.357	3471424.219	08/03/09	4735.18	294.98	4440.20
RUIZ	531770	602857.357	3471424.219	10/28/09	4735.18	295.33	4439.85
SCHWARTZ	210865	600811.529	3468268.057	02/08/08	4551.58	121.80	4429.78
SCHWARTZ	210865	600811.529	3468268.057	05/19/08	4551.58	123.49	4428.09
SCHWARTZ	210865	600811.529	3468268.057	07/29/08	4551.58	122.64	4428.94
SCHWARTZ	210865	600811.529	3468268.057	10/22/08	4551.58	123.39	4428.19
SCHWARTZ	210865	600811.529	3468268.057	01/29/09	4551.58	122.87	4428.71
SCHWARTZ	210865	600811.529	3468268.057	04/17/09	4551.58	123.53	4428.05
SCHWARTZ	210865	600811.529	3468268.057	07/10/09	4551.58	124.15	4427.43
SCHWARTZ	210865	600811.529	3468268.057	10/06/09	4551.58	124.55	4427.03
STEPHENS	808560	606981.766	3469072.799	05/13/08	4651.22	44.94	4606.28
STEPHENS	808560	606981.766	3469072.799	08/05/08	4651.22	46.61	4604.61
STEPHENS	808560	606981.766	3469072.799	10/16/08	4651.22	46.60	4604.62
STEPHENS	808560	606981.766	3469072.799	01/21/09	4651.22	47.19	4604.03
STEPHENS	808560	606981.766	3469072.799	04/08/09	4651.22	48.45	4602.77
STEPHENS	808560	606981.766	3469072.799	07/07/09	4651.22	49.41	4601.81
STEPHENS	808560	606981.766	3469072.799	10/07/09	4651.22	50.33	4600.89
SUNBELT	201531	605998.250	3471735.149	02/06/08	4806.52	352.10	4454.42
SUNBELT	201531	605998.250	3471735.149	05/15/08	4806.52	358.97	4447.55
SUNBELT	201531	605998.250	3471735.149	08/05/08	4806.52	Dry	<4426
SUNBELT	201531	605998.250	3471735.149	10/16/08	4806.52	347.00	4459.52
SUNBELT	201531	605998.250	3471735.149	01/21/09	4806.52	344.78	4461.74
SUNBELT	201531	605998.250	3471735.149	04/10/09	4806.52	349.64	4456.88
SUNBELT	201531	605998.250	3471735.149	07/08/09	4806.52	356.99	4449.53
SUNBELT	201531	605998.250	3471735.149	10/05/09	4806.52	Dry	<4426

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
SWAN	NR	607378.547	3470648.298	02/13/08	4716.59	26.50	4690.09
SWAN	NR	607378.547	3470648.298	05/14/08	4716.59	30.69	4685.90
SWAN	NR	607378.547	3470648.298	07/24/08	4716.59	32.06	4684.53
SWAN	NR	607378.547	3470648.298	10/16/08	4716.59	27.53	4689.06
SWAN	NR	607378.547	3470648.298	01/20/09	4716.59	29.77	4686.82
SWAN	NR	607378.547	3470648.298	04/07/09	4716.59	31.47	4685.12
SWAN	NR	607378.547	3470648.298	07/08/09	4716.59	33.61	4682.98
SWAN	NR	607378.547	3470648.298	10/05/09	4716.59	35.12	4681.47
TM-02A	522574	604152.059	3472008.794	03/04/08	4808.43	346.62	4461.81
TM-02A	522574	604152.059	3472008.794	05/23/08	4808.43	346.16	4462.27
TM-02A	522574	604152.059	3472008.794	08/15/08	4808.43	353.91	4454.52
TM-02A	522574	604152.059	3472008.794	10/30/08	4808.43	349.45	4458.98
TM-02A	522574	604152.059	3472008.794	02/24/09	4808.43	348.64	4459.79
TM-02A	522574	604152.059	3472008.794	05/06/09	4808.43	349.38	4459.05
TM-02A	522574	604152.059	3472008.794	08/12/09	4808.43	349.13	4459.30
TM-02A	522574	604152.059	3472008.794	11/04/09	4808.43	348.97	4459.46
TM-03	522575	606366.130	3473711.046	03/12/08	4897.85	127.14	4770.71
TM-03	522575	606366.130	3473711.046	05/20/08	4897.85	127.40	4770.45
TM-03	522575	606366.130	3473711.046	08/06/08	4897.85	128.02	4769.83
TM-03	522575	606366.130	3473711.046	11/12/08	4897.85	128.00	4769.85
TM-03	522575	606366.130	3473711.046	02/26/09	4897.85	126.94	4770.91
TM-03	522575	606366.130	3473711.046	05/13/09	4897.85	113.86	4783.99
TM-03	522575	606366.130	3473711.046	08/18/09	4897.85	128.80	4769.05
TM-03	522575	606366.130	3473711.046	11/10/09	4897.85	125.38	4772.47
TM-06 MILLER	522695	606055.975	3468376.658	02/26/08	4707.88	158.78	4549.10
TM-06 MILLER	522695	606055.975	3468376.658	05/20/08	4707.88	158.76	4549.12
TM-06 MILLER	522695	606055.975	3468376.658	08/04/08	4707.88	158.80	4549.08
TM-06 MILLER	522695	606055.975	3468376.658	10/29/08	4707.88	158.85	4549.03
TM-06 MILLER	522695	606055.975	3468376.658	02/16/09	4707.88	159.28	4548.60
TM-06 MILLER	522695	606055.975	3468376.658	05/13/09	4707.88	158.81	4549.07
TM-06 MILLER	522695	606055.975	3468376.658	08/18/09	4707.88	158.91	4548.97
TM-06 MILLER	522695	606055.975	3468376.658	11/12/09	4707.88	158.96	4548.92
TM-16	522578	605588.075	3469842.199	03/05/08	4717.71	81.00	4636.71
TM-16	522578	605588.075	3469842.199	05/22/08	4717.71	81.24	4636.47
TM-16	522578	605588.075	3469842.199	08/06/08	4717.71	81.65	4636.06
TM-16	522578	605588.075	3469842.199	11/05/08	4717.71	81.75	4635.96
TM-16	522578	605588.075	3469842.199	02/26/09	4717.71	81.88	4635.83
TM-16	522578	605588.075	3469842.199	05/13/09	4717.71	82.01	4635.70
TM-16	522578	605588.075	3469842.199	08/19/09	4717.71	82.37	4635.34
TM-16	522578	605588.075	3469842.199	11/10/09	4717.71	82.83	4634.88
TM-19A	522581	602458.710	3469197.426	03/06/08	4645.87	199.85	4446.02
TM-19A	522581	602458.710	3469197.426	05/22/08	4645.87	199.50	4446.37
TM-19A	522581	602458.710	3469197.426	08/06/08	4645.87	199.19	4446.68
TM-19A	522581	602458.710	3469197.426	11/18/08	4645.87	199.46	4446.41
TM-19A	522581	602458.710	3469197.426	03/03/09	4645.87	199.81	4446.06
TM-19A	522581	602458.710	3469197.426	04/22/09	4645.87	200.57	4445.30
TM-19A	522581	602458.710	3469197.426	08/12/09	4645.87	201.46	4444.41
TM-19A	522581	602458.710	3469197.426	11/04/09	4645.87	201.16	4444.71

TABLE 3
Compilation of Groundwater Elevation Data

Well Name	ADWR 55 Registry No.	UTM East	UTM North	Date	Measuring Point Elevation[1] (ft amsl)	Depth To Water (feet)	Groundwater Elevation (ft amsl)
TM-42	562554	603698.271	3469104.903	03/05/08	4666.67	211.04	4455.63
TM-42	562554	603698.271	3469104.903	05/22/08	4666.67	210.98	4455.69
TM-42	562554	603698.271	3469104.903	08/06/08	4666.67	211.55	4455.12
TM-42	562554	603698.271	3469104.903	11/06/08	4666.67	207.05	4459.62
TM-42	562554	603698.271	3469104.903	02/18/09	4666.67	212.31	4454.36
TM-42	562554	603698.271	3469104.903	05/07/09	4666.67	212.37	4454.30
TM-42	562554	603698.271	3469104.903	08/18/09	4666.67	212.77	4453.90
TM-42	562554	603698.271	3469104.903	11/03/09	4666.67	213.05	4453.62
TVI 236	802236	600552.215	3467978.431	05/07/08	4561.98	123.30	4438.68
TVI 236	802236	600552.215	3467978.431	07/15/08	4561.98	121.55	4440.43
TVI 236	802236	600552.215	3467978.431	10/15/08	4561.98	122.35	4439.63
TVI 236	802236	600552.215	3467978.431	02/11/09	4561.98	121.28	4440.70
TVI 236	802236	600552.215	3467978.431	04/17/09	4561.98	122.73	4439.25
TVI 236	802236	600552.215	3467978.431	07/21/09	4561.98	123.96	4438.02
TVI 236	802236	600552.215	3467978.431	10/19/09	4561.98	123.88	4438.10
TVI 713	567713	600729.095	3468412.946	05/07/08	4567.22	127.10	4440.12
TVI 713	567713	600729.095	3468412.946	07/14/08	4567.22	126.30	4440.92
TVI 713	567713	600729.095	3468412.946	10/15/08	4567.22	130.00	4437.22
TVI 713	567713	600729.095	3468412.946	02/11/09	4567.22	149.87	4417.35
TVI 713	567713	600729.095	3468412.946	04/17/09	4567.22	126.73	4440.49
TVI 713	567713	600729.095	3468412.946	07/21/09	4567.22	127.36	4439.86
TVI 713	567713	600729.095	3468412.946	10/19/09	4567.22	127.79	4439.43
WEISKOPF	641802	601154.951	3468658.855	02/15/08	4586.89	143.31	4443.58
WEISKOPF	641802	601154.951	3468658.855	05/07/08	4586.89	143.90	4442.99
WEISKOPF	641802	601154.951	3468658.855	07/16/08	4586.89	144.22	4442.67
WEISKOPF	641802	601154.951	3468658.855	10/28/08	4586.89	145.81	4441.08
WEISKOPF	641802	601154.951	3468658.855	01/29/09	4586.89	143.99	4442.90
WEISKOPF	641802	601154.951	3468658.855	04/15/09	4586.89	144.38	4442.51
WEISKOPF	641802	601154.951	3468658.855	07/15/09	4586.89	144.99	4441.90
WEISKOPF	641802	601154.951	3468658.855	10/15/09	4586.89	145.66	4441.23
ZANDER	205126	599678.880	3467998.486	02/04/08	4580.94	144.85	4436.09
ZANDER	205126	599678.880	3467998.486	05/06/08	4580.94	145.33	4435.61
ZANDER	205126	599678.880	3467998.486	07/16/08	4580.94	146.40	4434.54
ZANDER	205126	599678.880	3467998.486	10/28/08	4580.94	146.01	4434.93
ZANDER	205126	599678.880	3467998.486	02/10/09	4580.94	144.83	4436.11
ZANDER	205126	599678.880	3467998.486	04/16/09	4580.94	144.94	4436.00
ZANDER	205126	599678.880	3467998.486	07/14/09	4580.94	146.14	4434.80
ZANDER	205126	599678.880	3467998.486	10/13/09	4580.94	146.77	4434.17

Notes:

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

ft amsl = feet above mean sea level

NA = Not Applicable

NR = No Record

[1] Survey Source: Hydro Geo Chem, Inc. (measuring point elevation = top of well casing)

[2] Measuring point elevation for third quarter 2008 changed to reflect well survey completed on September 18, 2008

[3] Depth to Water measurement provided by Arizona Water Company

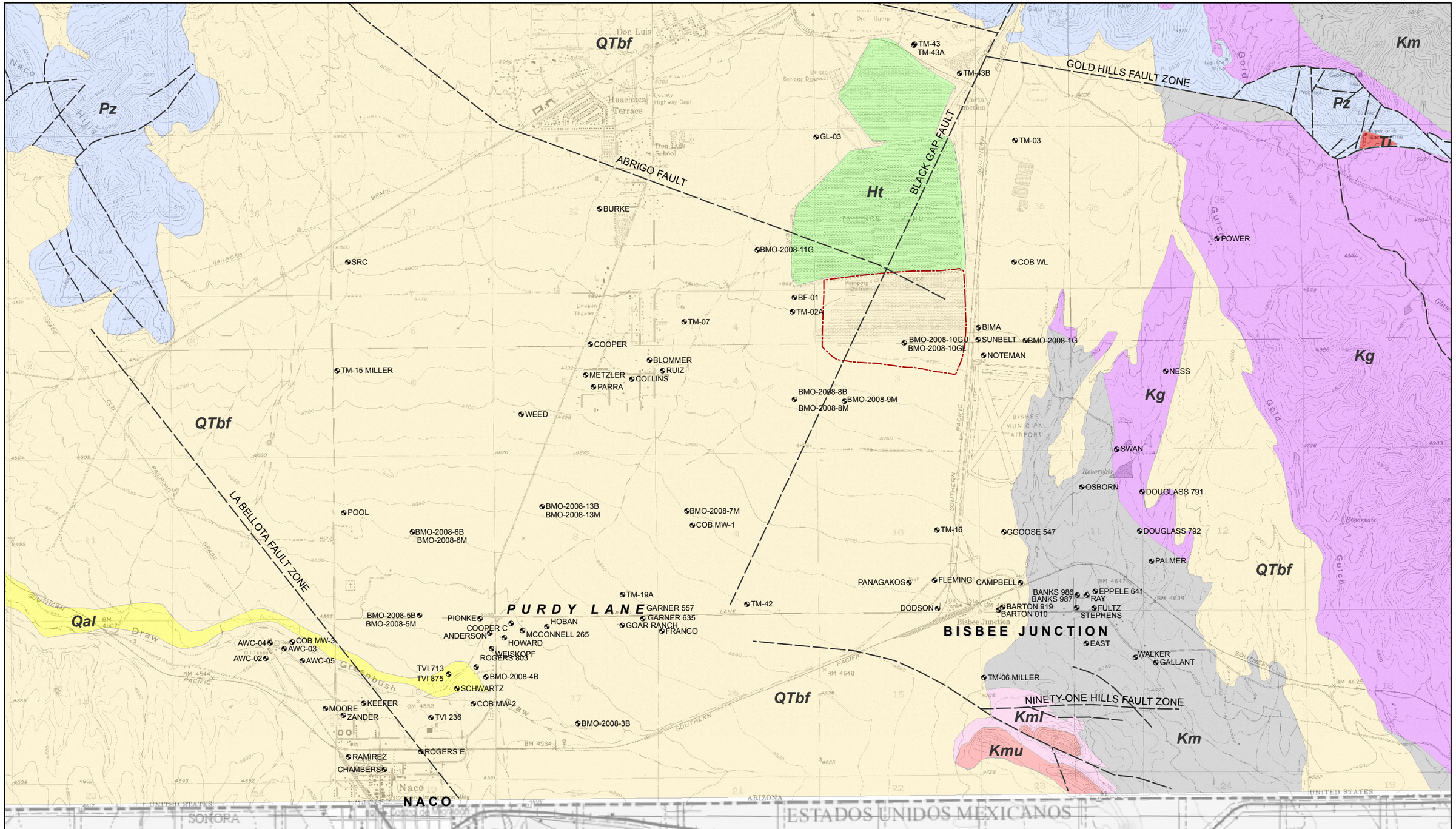
[4] Survey source ADWR Well Completion Report

[5] Depth to Water measurement provided by Naco Water Company

[6] Measuring point elevation for second quarter 2009 changed to reflect well survey completed on April 27, 2009

[7] Well previously identified as ROGERS 803

FIGURES



Legend

- AWC-05 Well ID
- Faults (inferred)
- Former Evaporation Ponds

Recent Alluvium
- Ht Holocene Tailings
- Qal Quaternary Alluvium

Basin Fill
- QTbf Quaternary - Tertiary Basin Fill

Bedrock Complex
- Ti Tertiary Intrusive
- Kc Cintura Formation
- Kmu Upper Mural Limestone
- Kml Lower Mural Limestone
- Km Morita Formation

Undifferentiated Bisbee Group

- Kg Glance Conglomerate
- Pz Paleozoic Sedimentary Formations, Undifferentiated

0 1500 3000 4500 Feet

PROJECTION: UTM Zone 12 NAD83

N

HYDRO GEO CHEM, INC.

GENERALIZED GEOLOGY AND WELL LOCATIONS

Approved	Date	Author	Date	File Name	Figure
DRS	01/07/10	AMC	01/07/10	8720314G	1

Screened Formation
- Basin Fill
- Basin Fill and Undifferentiated Bisbee Group
- Undifferentiated Bisbee Group
- Undifferentiated Bisbee Group - Estimated
- Undifferentiated Bisbee Group and Glance Conglomerate
- Glance Conglomerate
- Glance Conglomerate-Estimated

Undifferentiated Bisbee Group: Cintura Formation, Upper Mural Limestone, Lower Mural Limestone, and Morita Formation

GL-03, 49
TM-03, 106
BURKE, 26
BMO-2008-11G, 13.9
COB WL, 96.1
BF-01, 1280
TM-02A, 21.8
TM-07, 134
BIMA, 233
BMO-2008-10GU, 1730
BMO-2008-10GL, 1100
BMO-2008-1G, 103
COOPER, 33.6
NOTEMAN, 281
TM-15 MILLER, 14.8
RUIZ, 227
METZLER, 315
COLLINS, 513
DURAZO, 377
PARRA, 388
NESS, 51.3
BMO-2008-8B, 1510 / 1520
BMO-2008-8M, 104
BMO-2008-9M, 56.9
WEED, 12.7
SWAN, 19.7
OSBORN, 17.9
BMO-2008-13B, 1010
BMO-2008-13M, 403
BMO-2008-7M, 26.1
POOL, 122
COB MW-1, 820
TM-16, 505
GGOOSE 547, 188
BMO-2008-6B, 48.7
BMO-2008-6M, 187
PALMER, 16.2
PANAGAKOS, 472
TM-19A, 63
PIONKE, 403
TM-42, 401
BANKS 986, 67.7
RAY, 127
DODSON, 49.3
NWC-04, 193
FULTZ, 72 / 71.8
BMO-2008-5B, 181 / 185
BMO-2008-5M, 123
COOPER C, 830
GARNER 635, 36.1
HOBAN, 670 / 780
FRANCO, 650
ANDERSON, 510
MCCONNELL 265, 666
COB MW-3, 74.2 / 73.9
AWC-04, 25.7
WEISKOPF, 484
HOWARD, 600
EAST, 13.4
AWC-03, 50.5
AWC-02, 16.8
AWC-05, 16.5
ROGERS 596, 540
TVI 875, 247
BMO-2008-4B, 11.2
TM-06 MILLER, 31.1
SCHWARTZ, 120
NWC-03, 450
KEEFER, 8.7
COB MW-2, 32.2
MOORE, 7.1
ZANDER, 6.3
TVI 236, 33.2
BMO-2008-3B, 153
NWC-06, 8
ROGERS E, 5.8
RAMIREZ, 8.4
CHAMBERS, 6.5
NWC-02, 6.8

1500
1000
500
250

ABRIGO FAULT
BLACK GAP FAULT

Terrace
Don Lans School
Drive-in Theater
Junction
Bisbee Junction
BISBEE MUNICIPAL AIRPORT
Reservoir
Naco
Draw
Gulch
Greenbush Draw
TAILINGS
SOUTHERN PACIFIC
RAILROAD
GRADE
OLD

Legend

TM-19A, 61.3 Well ID, Sulfate Concentration (mg/L)
(Duplicate results separated by "/")

250 Sulfate Isoline (mg/L)

Faults (inferred)

0 1250 2500 3750 Feet

PROJECTION: UTM Zone 12 NAD83

N

HYDRO GEO CHEM, INC.

SULFATE CONCENTRATIONS IN GROUNDWATER FOURTH QUARTER 2009

Approved	Date	Author	Date	File Name	Figure
DRS	01/07/10	AMC	01/07/10	8720401G	2

Screened Formation
- Basin Fill
- Basin Fill and Undifferentiated Bisbee Group
- Undifferentiated Bisbee Group
- Undifferentiated Bisbee Group - Estimated
- Undifferentiated Bisbee Group and Glance Conglomerate
- Glance Conglomerate
- Glance Conglomerate-Estimated

Undifferentiated Bisbee Group: Cintura, Mural Limestone, and Morita Formations

GL-03 4269.00
AREA OF LOW WATER ELEVATIONS
BMO-2008-11G 4271.26
TM-03 4772.47
COB WL 4769.24
BF-01 4486.58
TM-02A 4459.46
BMO-2008-10GU, GL 239-439: 4503.68 700-800: 4282.78
BIMA 4431.94
SUNBELT < 4426
BMO-2008-1G 4741.49
NESS 4223.89
METZLER 4440.54
COLLINS 4443.20
RUIZ 4439.85
BMO-2008-8B,M 370-470: 4455.40 1100-1200: 4453.64
BMO-2008-9M 4476.06
AREA OF LOW WATER ELEVATIONS
AREA OF LOW WATER ELEVATION
SWAN 4681.47
OSBORN 4636.86
DOUGLASS 791 4671.78
DOUGLASS 792 4595.54
TM-16 4634.88
GGOOSE 547 4479.45
RAY 4598.04
PANAGAKOS 4524.20
FLEMING 4385.84
BANKS 987 4411.47
EPPELE 641 4612.94
DODSON 4599.07
STEPHENS 4600.89
FULTZ 4586.76
EAST 4565.06
TM-06 MILLER 4548.92
AREA OF WIDELY VARYING WATER ELEVATIONS
POOL 4433.03
BMO-2008-6B,M 195-255: 4436.40 340-440: 4434.76
BMO-2008-13B,M 264-464: 4442.13 920-1020: 4438.24
BMO-2008-7M 4448.78
COB MW-1 4448.57
TM-42 4453.62
ANDERSON 4433.03
TM-19A 4444.71
GARNER 635 4431.93
GARNER 557 4433.62
BMO-2008-5B,M 140-280: 4439.22 340-440: 4437.34
PIONKE 4441.17
COOPER C 4438.17
HOBAN 4432.21
NSD 02 4430.21
NSD 03 4432.66
AWC-04 4430.48
COB MW-3 4420.60
AWC-05 4253.51
AWC-02 4430.64
AWC-03 4423.82
ROGERS 596 4441.89
WEISKOPF 4441.23
HOWARD 4437.62
GOAR RANCH 4445.41
MCCONNELL 265 4442.57
TVI 713 4439.43
BMO-2008-4B 4441.13
NWC-03 CAP 4441.22
SCHWARTZ 4427.03
KEEFER 4435.36
ZANDER 4434.17
TVI 236 4438.10
COB MW-2 4440.88
BMO-2008-3B 4444.37
NWC-06 4444.5
ROGERS E 4439.90
RAMIREZ 4436.25
NWC-02 4445.44
4475
4450
4500
4750
4725
4700
4675
4650
4625
4440
4435
4445

Legend

POOL 4433.03 Well Identification Groundwater Elevation (ft amsl)

Groundwater Elevation Contours (interpreted)
Groundwater Depression
Faults (inferred)

Co-Located Wells
Well Identification
Screen (ft bgs): Water Elevation (ft amsl)

0 1250 2500 3750 Feet

PROJECTION: UTM Zone 12 NAD83

N

HYDRO GEO CHEM, INC.

GROUNDWATER ELEVATIONS FOURTH QUARTER 2009

Approved	Date	Author	Date	File Name	Figure
DRS	01/07/10	AMC	01/07/10	8720400G	3

APPENDIX A

ARIZONA LAND SPECIALISTS, INC. WELL SURVEY

ARIZONA LAND SPECIALISTS, INC.
FREEPORT-MCMORAN COPPER QUEEN BRANCH
Bisbee Mitigation Order
November 12, 2009

ALS POINT	DESCRIPTION	ELEVATION NAVD88 (ft amsl)	UTM NAD83 NORTHING	UTM NAD83 EASTING
7114	ROGERS 596 TOC	4577.35	3468491.639	601001.503
7117	NSD-02 TOC	4531.38	3468821.474	598820.051
7118	NSD-02 PAD	4530.04	3468821.702	598820.118
7119	NSD-03 TOC	4518.28	3468694.259	598070.538
7120	NSD-03 PAD	4516.45	3468694.505	598070.624

ft amsl = feet above mean sea level
NAD83 = North American Datum 1983
NAVD88 = North American Vertical Datum 1988
TOC = Top of Casing
UTM = Universal Transverse Mercator, Zone 12N Band R

EXP 9/30/11
REGISTERED LAND SURVEYOR
CERTIFICATE NO.
30365
DAVID L.
SUTHERLAND
11/17/09
Date Signed
ARIZONA U.S.A.

APPENDIX B

DATA VERIFICATION REPORT

FOURTH QUARTER 2009
GROUNDWATER MONITORING REPORT

APPENDIX B

DATA VERIFICATION REPORT

FOURTH QUARTER 2009
GROUNDWATER MONITORING REPORT

Prepared for:

FREEPORT-MCMORAN
COPPER QUEEN BRANCH
36 West Highway 92
Bisbee, Arizona 85603

Prepared by:

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

January 8, 2010

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1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the fourth quarter 2009 by Hydro Geo Chem, Inc. (HGC) pursuant to Mitigation Order on Consent Docket No. P-121-07 (ADEQ, 2007). HGC collected groundwater samples from wells identified in Tasks 1.0 and 2.2 of the Work Plan (HGC, 2008a). Analytical results for groundwater samples collected for this project during the fourth quarter of 2009 were provided to HGC by ACZ Laboratories, Inc. (ACZ) for preparation of the fourth quarter 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 F of HGC, 2008a) for field sampling, chain-of-custody (COC) documentation, laboratory analysis, and reporting. This report reviews 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.

The laboratory reports for the fourth quarter 2009 samples including COC forms, laboratory correspondence, QC summaries, data qualifiers, internal QA/QC tests performed by ACZ and any case narratives are presented with the laboratory reports included in Appendix C. Based on the results of surrogate spike recoveries, matrix spike/recovery and matrix spike duplicate tests, ACZ did not advise of any modifications that should be made regarding the usability and data validation status of the laboratory test results. The analytical results for all 97 samples collected by HGC are contained in 16 reports having the ACZ Project numbers identified in the following table.

ACZ Project ID	Wells Reported
Number of wells sampled: 79 *Number of duplicate samples collected: 5* *Number of field and equipment blank samples collected: 10*	
L78616	BIMA, NOTEMAN, OSBORN, SWAN, PALMER, PANAGAKOS, DODSON, SCHWARTZ, RAMIREZ
L78690	ROGERS E, BANKS 986, RAY, PIONKE, FULTZ, EAST, DUP100809, EQB100809, FB100809
L78776	ANDERSON, COOPER C, FRANCO, MCCONNELL 265, HOWARD, KEEFER, ZANDER, MOORE, CHAMBERS
L78851	DURAZO, METZLER, GARNER 635, COOPER, WEISKOPF, HOBAN, DUP101509, EQB101509, FB101509
L78950	TVI 236, TVI 875, ROGERS 596, POOL, PARRA, COLLINS, WEED
L79039	AWC-02, AWC-03, AWC-04, AWC-05, NWC-02, NWC-03, NWC-04, NWC-06, COB MW-1, COB MW-2, COB MW-3, COB WL, DUP102209, EQB102209, FB102209
L79110	BMO-2008-1G, BMO-2008-3B, BMO-2008-4B, BMO-2008-6B, BMO-2008-6M, BMO-2008-7M
L79175	BMO-2008-5B, BMO-2008-5M, BMO-2008-13B, BMO-2008-13M, RUIZ, DUP102909, EQB102909, FB102909
L79261	BMO-2008-9M, BMO-2008-10GU, BMO-2008-10GL, TM-07, TM-15 MILLER, TM-42
L79289	ROGERS 596
L79290	BF-01, TM-02A, TM-19A, BMO-2008-8M
L79371	BMO-2008-8B, BMO-2008-11G, GL-03, TM-03, TM-16, DUP110909, EQB110909, FB110909
L79426	GGOOSE 547, TM-06 MILLER, NESS
L79527	NWC-04
L79940	NWC-04
L79941	BURKE

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 in standard units [SU], 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.

Documentation of the 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 attempted at each well that was sampled and at all wells where water level monitoring was conducted by HGC. Water levels were measured while the well pump was off. However, it was not always possible to ascertain from the well owners how long the pump had been off. Before measuring the water level at each well, the battery on the water level indicator was checked and the sensitivity level was adjusted, if necessary. Each measurement was collected and verified by measuring the depth to water multiple times in order to obtain a consistent reading and accurate measurement.

2.2 Groundwater Sampling

During this monitoring period groundwater samples were collected from wells designated for sampling for Task 1.0 (well inventory) and Task 2.2 (groundwater monitoring) 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 pH[1] and SC[2] multipurpose probe was calibrated. In addition, the water level indicator was checked for a signal which indicates a working meter and sufficient 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 probe to ensure 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 deionized 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 deionized 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 D) at each well for which this was the case. 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 groundwater samples were collected for analysis from 79 plume and well inventory monitor wells. Groundwater samples were collected by filtering the sample into a 250 milliliter bottle using clean filtration apparatus and one disposable 0.45-micron filter. All bottles were provided by ACZ and maintained in a clean and secure work area until used in the field.

[1] Field pH meter was calibrated using a two point calibration and pH buffers 4 and 7
[2] Field SC meter was calibrated using a standard stock solution of 1413 µS/cm

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 with deionized water.

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

3. SAMPLE HANDLING

All samples collected by 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 at 4 ºC or below, and in good condition.

4. LABORATORY QUALITY CONTROL

As specified in the QAPP, laboratory QC was maintained for all analyses through proper licensure, the use of approved analytical methods, QC measurements, appropriate 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 Method

The following United States Environmental Protection Agency (EPA) methods were used for sulfate analysis during this monitoring period.

- EPA Method 300.0 (Ion Chromatography)
- EPA Method 375.4 (Turbidimetric)

4.3 Method Detection Limit (MDL) and Practical Quantification Limit (PQL)

The MDL and PQL of the analytical methods used by ACZ are shown in the following table. The MDL for analyses of samples was equal to or less than the target MDL identified in the QAPP.

Method	MDL (mg/L)	PQL (mg/L)	Target MDL[1] (mg/L)
EPA 300.0	0.5	3	10
EPA 375.4	1	5	10

mg/L = milligrams per liter
[1] Target MDL from Table F.2 of QAPP

4.4 Timeliness

All samples submitted for sulfate analysis were analyzed within the twenty-eight day holding time specified by each of the methods used for analysis.

4.5 Quality Control Measurements

The following QC samples were prepared and analyzed:

- Calibration blanks and calibration verification standards
- Analytical spike samples
- Laboratory duplicate samples
- Field blank samples

4.5.1 Calibration Blanks, and Calibration Verification Standards

Results from the analyses of the initial calibration blanks and initial calibration verification standards conducted by EPA Methods 300.0 and 375.4 also were reviewed. The results of each initial calibration blank analyzed showed no detections of the target analyte. All analytical results for the initial calibration verification standards and laboratory fortified blanks showed percent recoveries that were within the acceptance criteria specified by the ACZ QA plan and the QAPP.

4.5.2 Analytical Spike

Analytical spike samples were analyzed for the EPA Method 300.0. Spike recoveries for analytes were within the range of acceptability based on the acceptance criteria set by ACZ. Instances in which analytical spike recoveries were low or unusable were qualified with an "M2" or "M3" flag, respectively. However, in each case the method control sample recoveries were acceptable.

4.5.3 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were reviewed as part of this quality data verification report. Field duplicate samples are discussed in Section 5.1. The RPDs for most laboratory duplicate samples were within 20 percent, which is the tolerance range set by the laboratory. In some instances, the data were qualified with an "RA" flag indicating that the RPD was not used for data validation because the sample concentration was less than ten times the MDL, which is

too low for accurate evaluation according to ACZ. In all cases where the RPD could be calculated, the results met QA criteria and demonstrate an appropriate level of precision in laboratory analysis of these samples.

4.5.4 Field Blank Samples

During the fourth quarter of 2009, ten field blank samples were collected. Five field blanks using unfiltered deionized water (FB100809, FB101509, FB102209, FB102909, and FB110909) and five equipment blanks using filtered deionized water (EQB100809, EQB101509, EQB102209, EQB102909, and EQB110909). Field blank samples were collected and 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 and one equipment blank sample was collected for every twenty samples. Analytical results from field blank and equipment blank samples showed no detections.

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 Q4-2009 groundwater sampling and analysis conducted by HGC.

5.1 Precision

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

- Laboratory duplicate samples
- Field duplicate samples

As discussed in Sections 4.5.2 and 4.5.4, there were no exceedances of RPD QA criteria for any laboratory duplicates. During this monitoring period five field filtered duplicate samples (DUP100809, DUP101509, DUP102209, DUP102909, and DUP110909) were collected by HGC for analysis. The collection of five duplicate samples meets 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 five duplicate samples collected are provided in the table below. The range of RPD values was between 0.28 and 15.17 percent, all within the 20 percent acceptance criteria for field duplicates, as stated in Section 3.3.1 of the QAPP. Overall, the DQI for precision is deemed to be met.

Well ID	Duplicate Sample ID	ACZ Project ID	Sulfate (mg/L)	Duplicate (mg/L)	RPD (%)
FULTZ	DUP100809	L78690	72	71.8	.028
HOBAN	DUP101509	L78851	670	780	15.17
COB MW-3	DUO102209	L79039	74.2	73.9	.041
BMO-2008-5B	DUP102909	L79175	181	185	2.19
BMO-2008-8B	DUP110909	L79371	1510	1520	0.66

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 there were no significant exceedances of the recovery QA criteria for any of the calibration standards, analytical spikes, or laboratory duplicates, respectively. 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, 2008) following sampling procedures specified in the QAPP. Therefore, the samples are judged to provide a good representation of groundwater quality at the sampled locations. The analytical data are judged to be representative of groundwater conditions because the analyses used standard procedures and methods that met QA/QC guidelines of the QAPP.

5.5 Comparability

All samples were collected using standardized procedures (HGC, 2008) 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 and subsequently analyzed and reported 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 method used to analyze the samples meet the MDL requirements specified in Table F.2 of the QAPP. Therefore, the analytical sensitivity is considered acceptable for use in aquifer characterization.

6. REFERENCES

Arizona Department of Environmental Quality. 2007. Mitigation Order on Consent, Docket No. P-121-07, In the Matter of: Phelps Dodge Corporation, Copper Queen Branch, located at 36 West Highway 92, Bisbee, Arizona, ADEQ Identification Number 100531. November 14, 2007.

Hydro Geo Chem, Inc. 2008. Revision 1, Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Concentrator Tailing Storage Area, Cochise County, Arizona. July 3, 2008.

APPENDIX C

ACZ LABORATORIES, INC. ANALYTICAL REPORTS

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

Analytical Report

October 21, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L78616

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 07, 2009. This project has been assigned to ACZ's project number, L78616. 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 L78616. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 21, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BIMA

ACZ Sample ID: ***L78616-01***
Date Sampled: *10/05/09 11:45*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	233		*	mg/L	5	30	10/19/09 20:25	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: NOTEMAN

ACZ Sample ID: ***L78616-02***
Date Sampled: *10/05/09 12:52*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	281		*	mg/L	5	30	10/19/09 21:07	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: OSBORN

ACZ Sample ID: ***L78616-03***
Date Sampled: *10/05/09 14:47*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	17.9		*	mg/L	0.5	3	10/17/09 21:39	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: SWAN

ACZ Sample ID: ***L78616-04***
Date Sampled: *10/05/09 15:30*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	19.7		*	mg/L	0.5	3	10/17/09 22:00	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: PALMER

ACZ Sample ID: ***L78616-05***
Date Sampled: *10/05/09 16:33*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	16.2		*	mg/L	0.5	3	10/17/09 23:04	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: PANAGAKOS

ACZ Sample ID: ***L78616-06***
Date Sampled: *10/06/09 09:24*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	472		*	mg/L	5	30	10/19/09 21:49	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DODSON

ACZ Sample ID: ***L78616-07***
Date Sampled: *10/06/09 10:35*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	49.3		*	mg/L	0.5	3	10/17/09 23:46	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: SCHWARTZ

ACZ Sample ID: ***L78616-08***
Date Sampled: *10/06/09 13:14*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	120		*	mg/L	3	10	10/19/09 22:53	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: RAMIREZ

ACZ Sample ID: ***L78616-09***
Date Sampled: *10/06/09 14:43*
Date Received: *10/07/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	8.4		*	mg/L	0.5	3	10/18/09 0:28	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L78616***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272406LFB	LFB	10/17/09 14:37	WI090715-3	30		32.87	mg/L	109.6	90	110			
L78616-01AS	AS	10/19/09 20:46	WI090715-3	300	233	498.3	mg/L	88.4	90	110			M2
L78616-02DUP	DUP	10/19/09 21:28			281	327.6	mg/L				15.3	20	

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L78616***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L78616-01	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-02	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-03	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-04	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-05	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-06	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-07	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-08	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L78616-09	WG272406	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L78616
Date Received: 11:15:18 AM
Received By:
Date Printed: 10/7/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na9448	3.6	13

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L78616
Date Received: 11:15:18 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L78616-01	BIMA									X		
L78616-02	NOTEMAN									X		
L78616-03	OSBORN									X		
L78616-04	SWAN									X		
L78616-05	PALMER									X		
L78616-06	PANAGAKOS									X		
L78616-07	DODSON									X		
L78616-08	SCHWARTZ									X		
L78616-09	RAMIREZ									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L78616

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: Hydro Geo Chem, Inc
E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

PROJECT INFORMATION

Quote #: ~~872000 2.2~~ 504-IC
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
BIMA	10-05-09:1145	GW	1	X
NOTEMAN	10-05-09:1252	GW	1	X
OSBORN	10-05-09:1447	GW	1	X
SWAN	10-05-09:1530	GW	1	X
PALMER	10-05-09:1633	GW	1	X
PANAGAKOS	10-06-09:0924	GW	1	X
DODSON	10-06-09:1035	GW	1	X
SCHWARTZ	10-06-09:1314	GW	1	X
RAMIREZ	10-06-09:1443	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-6-09:1539		10-7-09 11:15

FRMAD050.03.05.02 White - Return with sample. Yellow - Retain for your records

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

Analytical Report

October 22, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L78690

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 09, 2009. This project has been assigned to ACZ's project number, L78690. 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 L78690. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 22, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: ROGERS E

ACZ Sample ID: ***L78690-01***
Date Sampled: *10/06/09 16:57*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	5.8			mg/L	0.5	3	10/20/09 5:34	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BANKS 986

ACZ Sample ID: ***L78690-02***
Date Sampled: *10/07/09 10:08*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	67.7			mg/L	0.5	3	10/20/09 5:55	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: RAY

ACZ Sample ID: ***L78690-03***
Date Sampled: *10/07/09 11:10*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	127			mg/L	3	10	10/20/09 14:25	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: PIONKE

ACZ Sample ID: ***L78690-04***
Date Sampled: *10/07/09 12:26*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	403		*	mg/L	5	30	10/20/09 7:19	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: MARTIN

ACZ Sample ID: ***L78690-05***
Date Sampled: *10/08/09 10:10*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	1130			mg/L	30	100	10/20/09 14:46	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FULTZ

ACZ Sample ID: ***L78690-06***
Date Sampled: *10/08/09 13:12*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	72.0			mg/L	0.5	3	10/20/09 8:01	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: EAST

ACZ Sample ID: ***L78690-07***
Date Sampled: *10/08/09 14:16*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	13.4			mg/L	0.5	3	10/20/09 9:05	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DUP100809

ACZ Sample ID: ***L78690-08***
Date Sampled: *10/08/09 00:00*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	71.8			mg/L	0.5	3	10/20/09 9:26	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FB100809

ACZ Sample ID: ***L78690-09***
Date Sampled: *10/08/09 00:00*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography		U		mg/L	0.5	3	10/20/09 9:47	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: EQB100809

ACZ Sample ID: ***L78690-10***
Date Sampled: *10/08/09 00:00*
Date Received: *10/09/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography		U		mg/L	0.5	3	10/20/09 10:08	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L78690***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272485													
WG272485ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272485ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272485LFB	LFB	10/20/09 0:38	WI090715-3	30		28.15	mg/L	93.8	90	110			
L78488-07AS	AS	10/20/09 1:20	WI090715-3	30	38.5	66.45	mg/L	93.2	90	110			
L78488-07DUP	DUP	10/20/09 1:41			38.5	38.38	mg/L				0.3	20	
L78690-02AS	AS	10/20/09 6:16	WI090715-3	30	67.7	99.22	mg/L	105.1	90	110			
L78690-02DUP	DUP	10/20/09 6:37			67.7	67.7	mg/L				0	20	

Hydro Geo Chem, Inc. ACZ Project ID: ***L78690***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L78690-04	WG272485	Sulfate	300.0 - Ion Chromatography	D1	Sample required dilution due to matrix.

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L78690
Date Received: 10:56:10 AM
Received By:
Date Printed: 10/9/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2404	0.8	14

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L78690
Date Received: 10:56:10 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L78690-01	ROGERS E									X		
L78690-02	BANKS 986									X		
L78690-03	RAY									X		
L78690-04	PIONKE									X		
L78690-05	MARTIN									X		
L78690-06	FULTZ									X		
L78690-07	EAST									X		
L78690-08	DUP100809									X		
L78690-09	FB100809									X		
L78690-10	EQB100809									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L78690

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc
E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd Tucson, Az 85705
Telephone: 520-293-1500 x-133

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

YES [X]
NO [ ]

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
ROGERS E	10-6-09:1657	GW	1	X
BANKS 986	10-7-09:1008	GW	1	X
RAY	10-7-09:1110	GW	1	X
PIONKE	10-7-09:1226	GW	1	X
MARTIN	10-8-09:1010	GW	1	X
FULTZ	10-8-09:1312	GW	1	X
EAST	10-8-09:1416	GW	1	X
DUP100809	10-8-09:	GW	1	X
FB100809	10-8-09:	GW	1	X
EQB100809	10-8-09:	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-8-09:1505		10-9-09 1058

FRMAD050.03.05.02 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

October 26, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L78776

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 14, 2009. This project has been assigned to ACZ's project number, L78776. 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 L78776. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 26, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: ANDERSON

ACZ Sample ID: ***L78776-01***
Date Sampled: *10/12/09 11:13*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	510		*	mg/L	10	50	10/21/09 14:52	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COOPER C

ACZ Sample ID: ***L78776-02***
Date Sampled: *10/12/09 12:14*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	830		*	mg/L	10	50	10/20/09 23:55	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FRANCO

ACZ Sample ID: ***L78776-03***
Date Sampled: *10/12/09 13:10*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	650		*	mg/L	10	50	10/21/09 0:16	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: HOWARD

ACZ Sample ID: ***L78776-04***
Date Sampled: *10/12/09 14:03*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	600		*	mg/L	10	50	10/21/09 0:37	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: MCCONNELL 265

ACZ Sample ID: ***L78776-05***
Date Sampled: *10/12/09 14:57*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	666		*	mg/L	5	30	10/21/09 1:40	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: KEEFER

ACZ Sample ID: ***L78776-06***
Date Sampled: *10/13/09 09:33*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	8.7		*	mg/L	0.5	3	10/21/09 2:02	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: ZANDER

ACZ Sample ID: ***L78776-07***
Date Sampled: *10/13/09 10:52*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	6.3		*	mg/L	0.5	3	10/21/09 2:23	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: MOORE

ACZ Sample ID: ***L78776-08***
Date Sampled: *10/13/09 11:44*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	7.1		*	mg/L	0.5	3	10/21/09 2:44	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: CHAMBERS

ACZ Sample ID: ***L78776-09***
Date Sampled: *10/13/09 12:33*
Date Received: *10/14/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	6.5		*	mg/L	0.5	3	10/21/09 3:05	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L78776***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272525													
WG272525LFB	LFB	10/20/09 17:14	WI090715-3	30		30.56	mg/L	101.9	90	110			
L78734-01AS	AS	10/20/09 22:52	WI090715-3	30	2.3	32.49	mg/L	100.6	90	110			
L78734-01DUP	DUP	10/20/09 23:13			2.3	2.31	mg/L				0.4	20	RA

Hydro Geo Chem, Inc.

ACZ Project ID: ***L78776***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L78776-01	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-02	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-03	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-04	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-05	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-06	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-07	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-08	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L78776-09	WG272525	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Certification Qualifiers

Hydro Geo Chem, Inc. ACZ Project ID: ***L78776***

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L78776
Date Received: 10/14/09 0:00
Received By: gac
Date Printed: 10/14/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA9502		0.1	14

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L78776
Date Received: 10/14/09 0:00
Received By: gac

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L78776-01	ANDERSON									X		
L78776-02	COOPER C									X		
L78776-03	FRANCO									X		
L78776-04	HOWARD									X		
L78776-05	MCCONNELL 265									X		
L78776-06	KEEFER									X		
L78776-07	ZANDER									X		
L78776-08	MOORE									X		
L78776-09	CHAMBERS									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

ACZ Laboratories, Inc. 6787L

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc
E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 87200.02.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
ANDERSON	10-12-09: 1113	GW	1	X
COOPER C	10-12-09: 1214	GW	1	X
FRANCO	10-12-09: 1310	GW	1	X
HOWARD	10-12-09: 1403	GW	1	X
MCCONNELL 265	10-12-09: 1457	GW	1	X
KEEFER	10-13-09: 0933	GW	1	X
ZANDER	10-13-09: 1052	GW	1	X
MOORE	10-13-09: 1144	GW	1	X
CHAMBERS	10-13-09: 1233	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-13-09: 1340	[illegible]	10-14-09 8:35

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

Analytical Report

October 29, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L78851

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 16, 2009. This project has been assigned to ACZ's project number, L78851. 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 L78851. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 29, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DURAZO

ACZ Sample ID: ***L78851-01***
Date Sampled: *10/14/09 09:45*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	377			mg/L	5	30	10/26/09 12:28	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: METZLER

ACZ Sample ID: ***L78851-02***
Date Sampled: *10/14/09 11:01*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	315			mg/L	5	30	10/23/09 18:26	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: GARNER 635

ACZ Sample ID: ***L78851-03***
Date Sampled: *10/14/09 12:20*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	36.1			mg/L	0.5	3	10/23/09 19:08	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COOPER

ACZ Sample ID: ***L78851-04***
Date Sampled: *10/14/09 13:58*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	33.6			mg/L	0.5	3	10/23/09 19:29	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: WEISKOPF

ACZ Sample ID: ***L78851-05***
Date Sampled: *10/15/09 09:38*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	484			mg/L	5	30	10/23/09 19:50	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: HOBAN

ACZ Sample ID: ***L78851-06***
Date Sampled: *10/15/09 11:00*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	670			mg/L	10	50	10/23/09 20:53	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DUP101509

ACZ Sample ID: ***L78851-07***
Date Sampled: *10/15/09 00:00*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	780			mg/L	10	50	10/26/09 13:10	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: EQB101509

ACZ Sample ID: ***L78851-08***
Date Sampled: *10/15/09 00:00*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography		U		mg/L	0.5	3	10/23/09 21:36	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FB101509

ACZ Sample ID: ***L78851-09***
Date Sampled: *10/15/09 00:00*
Date Received: *10/16/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography		U		mg/L	0.5	3	10/23/09 21:57	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L78851***

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272797													
WG272797LFB	LFB	10/23/09 12:27	WI090715-3	30		28.58	mg/L	95.3	90	110			
L78851-02AS	AS	10/23/09 18:47	WI090715-3	300	315	607.8	mg/L	97.6	90	110			
L78851-01DUP	DUP	10/26/09 12:49			377	390.7	mg/L				3.6	20	

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L78851***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L78851
Date Received: 10:57:11 AM
Received By:
Date Printed: 10/19/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na9530	0	13

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L78851
Date Received: 10:57:11 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L78851-01	DURAZO									X		
L78851-02	METZLER									X		
L78851-03	GARNER 635									X		
L78851-04	COOPER									X		
L78851-05	WEISKOPF									X		
L78851-06	HOBAN									X		
L78851-07	DUP101509									X		
L78851-08	EQB101509									X		
L78851-09	FB101509									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. C78851

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
DURAZO	10-14-09:0945	GW	1	X
METZLER	10-14-09:1101	GW	1	X
GARNER 635	10-14-09:1220	GW	1	X
COOPER	10-14-09:1358	GW	1	X
WEISKOPF	10-15-09:0938	GW	1	X
HOBAN	10-15-09:1100	GW	1	X
DUP101509	10-15-09:	GW	1	X
EQB101509	10-15-09:	GW	1	X
FB101509	10-15-09:	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-15-09:1150	[illegible]	10:16:0910:5[illegible]

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

Revised Analytical Report

Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tucson, AZ 85705

December 14, 2009

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L78950

Dan Simpson:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 21, 2009 and reported on November 03, 2009. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number L78950. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L78950. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

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

If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.

December 14, 2009

Project ID: 8720002.2
ACZ Project ID: L78950

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 7 ground water samples from Hydro Geo Chem, Inc. on October 21, 2009. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L78950. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

This project has been revised to change the sample ID on -03 at the request of the client.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TVI 236

ACZ Sample ID: ***L78950-01***
Date Sampled: *10/19/09 11:01*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.2			mg/L	0.5	3	10/26/09 15:59	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TVI 875

ACZ Sample ID: ***L78950-02***
Date Sampled: *10/19/09 12:07*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	247			mg/L	3	10	10/24/09 9:12	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: ROGERS 596

ACZ Sample ID: ***L78950-03***
Date Sampled: *10/19/09 14:37*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	590			mg/L	5	30	10/26/09 16:20	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: POOL

ACZ Sample ID: ***L78950-04***
Date Sampled: *10/20/09 09:43*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	122			mg/L	2	8	10/26/09 16:42	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: PARRA

ACZ Sample ID: ***L78950-05***
Date Sampled: *10/20/09 11:43*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	388			mg/L	5	30	10/29/09 1:42	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COLLINS

ACZ Sample ID: ***L78950-06***
Date Sampled: *10/20/09 12:27*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	513			mg/L	5	30	10/26/09 22:40	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: WEED

ACZ Sample ID: ***L78950-07***
Date Sampled: *10/20/09 13:03*
Date Received: *10/21/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	12.7			mg/L	0.5	3	10/26/09 23:02	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L78950***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272798													
WG272798LFB	LFB	10/24/09 0:04	WI090715-3	30		29.47	mg/L	98.2	90	110			
L78860-04DUP	DUP	10/24/09 5:41			830	911	mg/L				9.3	20	
L78860-05AS	AS	10/24/09 6:24	WI090715-3	600	640	1271	mg/L	105.2	90	110			
WG272878													
WG272878LFB	LFB	10/26/09 18:27	WI090715-3	30		28.71	mg/L	95.7	90	110			
L78699-01DUP	DUP	10/26/09 19:09			960	992	mg/L				3.3	20	
L78699-03AS	AS	10/26/09 19:52	WI090715-3	600	1110	1691	mg/L	96.8	90	110			

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L78950***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L78950
Date Received: 10/21/09 0:00
Received By: gac
Date Printed: 12/14/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
1529		0.4	13

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L78950
Date Received: 10/21/09 0:00
Received By: gac

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L78950-01	TVI 236									X		
L78950-02	TVI 875									X		
L78950-03	ROGERS 596									X		
L78950-04	POOL									X		
L78950-05	PARRA									X		
L78950-06	COLLINS									X		
L78950-07	WEED									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

ACZ Laboratories, Inc. L78950

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc
E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-113

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
TVI 236	10-19-09:1101	GW	1	X
TVI 875	10-19-09:1207	GW	1	X
ROGERS 803	10-19-09:1437	GW	1	X
POOL	10-20-09:0943	GW	1	X
PARRA	10-20-09:1143	GW	1	X
COLLINS	10-20-09:1217	GW	1	X
WEED	10-20-09:1303	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-20-09:1355	10-21-09	

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

Analytical Report

November 05, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L79039

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 23, 2009. This project has been assigned to ACZ's project number, L79039. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79039. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after December 05, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: AWC-05

ACZ Sample ID: ***L79039-01***
Date Sampled: *10/21/09 09:11*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	16.5			mg/L	0.5	3	10/28/09 19:22	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: AWC-02

ACZ Sample ID: ***L79039-02***
Date Sampled: *10/21/09 09:42*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	16.8			mg/L	0.5	3	10/28/09 20:04	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: AWC-03

ACZ Sample ID: ***L79039-03***
Date Sampled: *10/21/09 10:14*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	50.5			mg/L	0.5	3	10/28/09 20:46	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: AWC-04

ACZ Sample ID: ***L79039-04***
Date Sampled: *10/21/09 10:44*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	25.7			mg/L	0.5	3	10/28/09 21:07	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: NWC-04

ACZ Sample ID: ***L79039-05***
Date Sampled: *10/21/09 12:04*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	191			mg/L	5	30	10/29/09 18:31	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: NWC-03

ACZ Sample ID: ***L79039-06***
Date Sampled: *10/21/09 12:40*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	444			mg/L	5	30	10/29/09 18:52	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: NWC-06

ACZ Sample ID: ***L79039-07***
Date Sampled: *10/21/09 13:10*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	8.0			mg/L	0.5	3	10/28/09 22:53	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: NWC-02

ACZ Sample ID: ***L79039-08***
Date Sampled: *10/21/09 13:33*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	6.8			mg/L	0.5	3	10/28/09 23:14	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COB MW-1

ACZ Sample ID: ***L79039-09***
Date Sampled: *10/22/09 09:47*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	820			mg/L	10	50	10/29/09 19:13	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COB MW-3

ACZ Sample ID: ***L79039-10***
Date Sampled: *10/22/09 10:37*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	74.2			mg/L	0.5	3	10/28/09 23:56	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COB MW-2

ACZ Sample ID: ***L79039-11***
Date Sampled: *10/22/09 12:14*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	32.2			mg/L	0.5	3	10/30/09 1:12	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: COB WL

ACZ Sample ID: ***L79039-12***
Date Sampled: *10/22/09 13:21*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	96.1			mg/L	0.5	3	10/30/09 1:33	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DUP102209

ACZ Sample ID: ***L79039-13***
Date Sampled: *10/22/09 00:00*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	73.9			mg/L	0.5	3	10/30/09 1:54	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: EQB102209

ACZ Sample ID: ***L79039-14***
Date Sampled: *10/22/09 00:00*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U	*	mg/L	0.5	3	10/30/09 2:15	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FB102209

ACZ Sample ID: ***L79039-15***
Date Sampled: *10/22/09 00:00*
Date Received: *10/23/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U	*	mg/L	0.5	3	10/30/09 2:58	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79039***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG272971													
WG272971LFB	LFB	10/28/09 14:05	WI090715-3	30		27.76	mg/L	92.5	90	110			
L79039-01DUP	DUP	10/28/09 19:43			16.5	16.47	mg/L				0.2	20	
L79039-02AS	AS	10/28/09 20:25	WI090715-3	30	16.8	45.08	mg/L	94.3	90	110			
WG273175													
WG273175LFB	LFB	10/29/09 20:59	WI090715-3	30		30.44	mg/L	101.5	90	110			
L79004-02DUP	DUP	10/29/09 23:05			30.7	30.01	mg/L				2.3	20	
L79039-14DUP	DUP	10/30/09 2:37			U	U	mg/L				0	20	RA
L79039-15AS	AS	10/30/09 3:19	WI090715-3	30	U	30.79	mg/L	102.6	90	110			
L79004-01AS	AS	10/30/09 16:30	WI090715-3	300	467	737.2	mg/L	90.1	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79039***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79039-14	WG273175	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L79039-15	WG273175	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79039
Date Received: 10:11:26 AM
Received By:
Date Printed: 10/23/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
2320	0.5	13

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79039
Date Received: 10:11:26 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79039-01	AWC-05									X		
L79039-02	AWC-02									X		
L79039-03	AWC-03									X		
L79039-04	AWC-04									X		
L79039-05	NWC-04									X		
L79039-06	NWC-03									X		
L79039-07	NWC-06									X		
L79039-08	NWC-02									X		
L79039-09	COB MW-1									X		
L79039-10	COB MW-3									X		
L79039-11	COB MW-2									X		
L79039-12	COB WL									X		
L79039-13	DUP102209									X		
L79039-14	EQB102209									X		
L79039-15	FB102209									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L79039

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc
E-mail: Jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name:
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
AWC-05	10-21-09:0911	GW	1	X
AWC-02	10-21-09:0942	GW	1	X
AWC-03	10-21-09:1014	GW	1	X
AWC-04	10-21-09:1044	GW	1	X
NWC-04	10-21-09:1204	GW	1	X
NWC-03	10-21-09:1240	GW	1	X
NWC-06	10-21-09:1310	GW	1	X
NWC-02	10-21-09:1333	GW	1	X
COB MW-1	10-22-09:0947	GW	1	X
COB MW-3	10-22-09:1037	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 2

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-22-09:1410	[illegible]	10-23-09 10:11

ACZ Laboratories, Inc. L79039

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: Hydro Geo Chem, Inc.

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

YES [X]
NO [ ]

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
COB MW-2	10-22-09: 1214	GW	1	X
COB WL	10-22-09: 1321	GW	1	X
DUP102209	10-22-09:	GW	1	X
EQB102209	10-22-09:	GW	1	X
FB102209	10-22-09:	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 2 of 2

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-22-09:1410	[signature]	10-23-09 10:11

FRMAD050.03.05.02 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

November 10, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

Project ID: 8720002.2
ACZ Project ID: L79110

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 28, 2009. This project has been assigned to ACZ's project number, L79110. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79110. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-06M

ACZ Sample ID: ***L79110-01***
Date Sampled: *10/26/09 12:23*
Date Received: *10/28/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	187			mg/L	3	10	11/02/09 14:54	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-06B

ACZ Sample ID: ***L79110-02***
Date Sampled: *10/26/09 13:27*
Date Received: *10/28/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	48.7			mg/L	0.5	3	10/31/09 2:21	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-03B

ACZ Sample ID: ***L79110-03***
Date Sampled: *10/26/09 14:42*
Date Received: *10/28/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	153			mg/L	3	10	11/02/09 15:57	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-07M

ACZ Sample ID: ***L79110-04***
Date Sampled: *10/27/09 09:34*
Date Received: *10/28/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	26.1			mg/L	0.5	3	10/31/09 3:04	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-01G

ACZ Sample ID: ***L79110-05***
Date Sampled: *10/27/09 11:50*
Date Received: *10/28/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	103			mg/L	3	10	11/02/09 16:18	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-04B

ACZ Sample ID: ***L79110-06***
Date Sampled: *10/27/09 14:42*
Date Received: *10/28/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	11.2			mg/L	0.5	3	10/31/09 4:28	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79110***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG273270													
WG273270LFB	LFB	10/30/09 20:02	WI090715-3	30		28.65	mg/L	95.5	90	110			
L79110-01AS	AS	11/02/09 15:15	WI090715-3	150	187	348.3	mg/L	107.5	90	110			
L79110-01DUP	DUP	11/02/09 15:36			187	210.4	mg/L				11.8	20	

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79110***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Certification Qualifiers

Hydro Geo Chem, Inc. ACZ Project ID: ***L79110***

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79110
Date Received: 10/28/09 0:00
Received By: gac
Date Printed: 10/28/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
na9638		0.9	11

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79110
Date Received: 10/28/09 0:00
Received By: gac

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79110-01	BMO-2008-06M									X		
L79110-02	BMO-2008-06B									X		
L79110-03	BMO-2008-03B									X		
L79110-04	BMO-2008-07M									X		
L79110-05	BMO-2008-01G									X		
L79110-06	BMO-2008-04B									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

ACZ Laboratories, Inc. L79110

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC								
BMO-2008-06M	10-26-09: 1223	GW	1	X								
BMO-2008-06B	10-26-09: 1327	GW	1	X								
BMO-2008-03B	10-26-09: 1442	GW	1	X								
BMO-2008-07M	10-27-09: 0934	GW	1	X								
BMO-2008-01G	10-27-09: 1150	GW	1	X								
BMO-2008-04B	10-27-09: 1442	GW	1	X								

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-27-09: 1625	[signature]	10-28-09 11:49

FRMAD050.03.05.02 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

November 13, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L79175

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 30, 2009. This project has been assigned to ACZ's project number, L79175. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79175. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-13M

ACZ Sample ID: ***L79175-01***
Date Sampled: *10/28/09 15:18*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	403			mg/L	5	30	11/10/09 16:43	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: RUIZ

ACZ Sample ID: ***L79175-02***
Date Sampled: *10/28/09 16:27*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	220		*	mg/L	20	100	11/11/09 14:26	aml
Sulfate	M300.0 - Ion Chromatography	227			mg/L	3	10	11/10/09 17:04	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-13B

ACZ Sample ID: ***L79175-03***
Date Sampled: *10/28/09 17:44*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1010			mg/L	10	50	11/10/09 17:25	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: EQB102909

ACZ Sample ID: ***L79175-04***
Date Sampled: *10/28/09 00:00*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U		mg/L	0.5	3	11/09/09 15:41	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FB102909

ACZ Sample ID: ***L79175-05***
Date Sampled: *10/28/09 00:00*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U		mg/L	0.5	3	11/09/09 16:02	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DUP102909

ACZ Sample ID: ***L79175-06***
Date Sampled: *10/28/09 00:00*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	185			mg/L	3	10	11/10/09 17:46	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-05M

ACZ Sample ID: ***L79175-07***
Date Sampled: *10/28/09 10:50*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	123			mg/L	3	10	11/10/09 18:07	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-05B

ACZ Sample ID: ***L79175-08***
Date Sampled: *10/28/09 11:33*
Date Received: *10/30/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	181			mg/L	3	10	11/10/09 18:28	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79175***

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG273951													
WG273951ICB	ICB	11/11/09 11:15				U	mg/L		-3	3			
WG273951ICV	ICV	11/11/09 11:15	WI091102-3	20.08		20	mg/L	99.6	90	110			
WG273951LFB	LFB	11/11/09 14:19	WI091020-3	10		10.4	mg/L	104	90	110			
L79080-01DUP	DUP	11/11/09 14:24			250	252	mg/L				0.8	20	
L79080-02AS	AS	11/11/09 14:26	SO4TURB20	10	250	260	mg/L	100	90	110			
WG273951ICB1	ICB	11/11/09 15:34				U	mg/L		-3	3			
WG273951ICV1	ICV	11/11/09 15:34	WI091102-3	20.08		19.4	mg/L	96.6	90	110			

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG273767													
WG273767LFB	LFB	11/09/09 12:52	WI091109-1	30		31.31	mg/L	104.4	90	110			
L79136-01DUP	DUP	11/09/09 13:34			704	746.9	mg/L				5.9	20	
L79136-03AS	AS	11/10/09 16:21	WI091109-1	300	278	568.6	mg/L	96.9	90	110			

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79175***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79175
Date Received: 10/30/09 0:00
Received By: gac
Date Printed: 11/2/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
na9657		3.8	14

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79175
Date Received: 10/30/09 0:00
Received By: gac

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79175-01	BMO-2008-13M									X		
L79175-02	RUIZ									X		
L79175-03	BMO-2008-13B									X		
L79175-04	EQB102909									X		
L79175-05	FB102909									X		
L79175-06	DUP102909									X		
L79175-07	BMO-2008-05M									X		
L79175-08	BMO-2008-05B									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

ACZ Laboratories, Inc. L79175

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc.
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc
E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 X-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
BMO-2008-13M	10-28-09: 1518	GW	1	X
RUIZ	10-28-09: 1627	GW	1	X
BMO-2008-13B	10-28-09: 1744	GW	1	X
EQB102909	10-29-09:	GW	1	X
FB102909	10-29-09:	GW	1	X
DUP102909	10-29-09:	GW	1	X
BMO-2008-05M	10-29-09: 1050	GW	1	X
BMO-2008-05B	10-29-09: 1135	GW	1	X

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	10-29-09: 1240		10-29-09 11:50

FRMAD050.03.05.02 White - Return with sample. Yellow - Retain for your records.

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

Revised Analytical Report

Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Rd. Suite 101
Tucson, AZ 85705

December 4, 2009

Project ID: 8720002.2
ACZ Project ID: L79261

Dan Simpson:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 5, 2009 and reported on November 16, 2009. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L79261. 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 L79261. 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.

All samples and sub-samples associated with this project will be disposed of after December 16, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-10GL

ACZ Sample ID: ***L79261-01***
Date Sampled: *11/02/09 14:34*
Date Received: *11/05/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1100			mg/L	30	100	11/10/09 9:17	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-10GU

ACZ Sample ID: ***L79261-02***
Date Sampled: *11/02/09 16:10*
Date Received: *11/05/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1730			mg/L	30	100	11/10/09 9:38	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-07

ACZ Sample ID: ***L79261-03***
Date Sampled: *11/03/09 09:52*
Date Received: *11/05/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	134			mg/L	3	10	11/10/09 9:59	aml

Arizona license number: AZ0102

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-42

ACZ Sample ID: ***L79261-04***
Date Sampled: *11/03/09 11:00*
Date Received: *11/05/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	430			mg/L	5	30	11/30/09 17:32	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-15 MILLER

ACZ Sample ID: ***L79261-05***
Date Sampled: *11/03/09 11:51*
Date Received: *11/05/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	14.8			mg/L	0.5	3	11/11/09 1:09	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-09M

ACZ Sample ID: ***L79261-06***
Date Sampled: *11/03/09 14:36*
Date Received: *11/05/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	56.9			mg/L	0.5	3	11/11/09 1:52	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79261***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG273768													
WG273768LFB	LFB	11/10/09 0:29	WI091109-1	30		32.26	mg/L	107.5	90	110			
L79247-12AS	AS	11/10/09 6:49	WI091109-1	30	U	32.09	mg/L	107	90	110			
L79247-11DUP	DUP	11/10/09 22:42			192	195.2	mg/L				1.7	20	
WG273873													
WG273873LFB	LFB	11/11/09 0:48	WI091109-1	30		30.11	mg/L	100.4	90	110			
L79261-05DUP	DUP	11/11/09 1:31			14.8	14.77	mg/L				0.2	20	
L79261-06AS	AS	11/11/09 2:13	WI091109-1	30	56.9	84.83	mg/L	93.1	90	110			
WG274850													
WG274850ICV	ICV	11/25/09 14:50	WI091017-1	50.2		49.54	mg/L	98.7	90	110			
WG274850ICB	ICB	11/25/09 15:11				U	mg/L		-1.5	1.5			
WG274850LFB	LFB	11/30/09 12:15	WI091109-1	30		31.52	mg/L	105.1	90	110			
L79261-04DUP	DUP	11/30/09 17:53			430	433.9	mg/L				0.9	20	
L79277-01AS	AS	11/30/09 18:35	WI091109-1	30	8	37.88	mg/L	99.6	90	110			

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79261***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Certification Qualifiers

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79261***

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79261
Date Received: 9:08:39 AM
Received By:
Date Printed: 11/5/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1908	1.2	13

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79261
Date Received: 9:08:39 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79261-01	BMO-2008-10GL									X		
L79261-02	BMO-2008-10GU									X		
L79261-03	TM-07									X		
L79261-04	TM-42									X		
L79261-05	TM-15 MILLER									X		
L79261-06	BMO-2008-09M									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L79261

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc.
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC							
BMO-2008-10GL	11-2-09:1434	GW	1	X							
BMO-2008-10GU	11-2-09:1610	GW	1	X							
TM-07	11-3-09:0952	GW	1	X							
TM-42	11-3-09:1100	GW	1	X							
TM-15 MILLER	11-3-09:1151	GW	1	X							
BMO-2008-09M	11-3-09:1436	GW	1	X							

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	11-3-09:1540		11/5/09:08

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

Revised Analytical Report

Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tucson, AZ 85705

December 14, 2009

Project ID: 8720002.2
ACZ Project ID: L79289

Dan Simpson:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 06, 2009 and reported on November 09, 2009. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number L79289. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79289. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

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

If you have any questions, please contact your Project Manager or Customer Service Representative.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.

December 14, 2009

Project ID: 8720002.2
ACZ Project ID: L79289

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 ground water sample from Hydro Geo Chem, Inc. on November 6, 2009. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L79289. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

This sample was analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

This project has been revised to change the sample ID on -01 at the request of the client.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: ROGERS 596

ACZ Sample ID: ***L79289-01***
Date Sampled: *11/05/09 09:42*
Date Received: *11/06/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride	SM4500Cl-E	21			mg/L	1	5	11/06/09 14:19	aml
Sulfate	375.4 - Turbidimetric	540		*	mg/L	20	100	11/06/09 16:04	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79289***

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG273700													
WG273700ICB	ICB	11/06/09 13:24				U	mg/L		-3	3			
WG273700ICV	ICV	11/06/09 13:24	WI091019-2	54.835		56.2	mg/L	102.5	90	110			
WG273700LFB1	LFB	11/06/09 14:07	WI091019-4	30		30.5	mg/L	101.7	90	110			
WG273700LFB2	LFB	11/06/09 14:11	WI091019-4	30		30.5	mg/L	101.7	90	110			
L79172-01AS	AS	11/06/09 14:17	WI091019-4	30	4	35.5	mg/L	105	90	110			
L79205-01DUP	DUP	11/06/09 14:19			11	11	mg/L				0	20	

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG273701													
WG273701ICB1	ICB	11/06/09 15:34				U	mg/L		-3	3			
WG273701ICV1	ICV	11/06/09 15:34	WI091102-3	20.08		20	mg/L	99.6	90	110			
WG273701LFB	LFB	11/06/09 15:41	WI091020-3	10		9.5	mg/L	95	90	110			
L79103-07DUP	DUP	11/06/09 16:00			2600	2570	mg/L				1.2	20	
L79107-01AS	AS	11/06/09 16:02	SO4TURB5	10	126	133.8	mg/L	78	90	110			M2

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79289***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79289-01	WG273701	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79289
Date Received: 11/06/09 0:00
Received By: lcp
Date Printed: 12/14/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
1897		1.7	15

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79289
Date Received: 11/06/09 0:00
Received By: lcp

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79289-01	ROGERS 596									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: lcp

ACZ Laboratories, Inc.

L-9289

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

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

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

PROJECT INFORMATION

Quote #: EPA 375.4
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	EPA 375.4							
ROGERS 803	11-5-09: 0942	GW	1	X							

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

REMARKS

Quick turn around ASAP

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	11-5-09 1530	KSJ	11/6/09 10:00

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

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

Analytical Report

November 13, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L79290

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 06, 2009. This project has been assigned to ACZ's project number, L79290. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79290. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-19A

ACZ Sample ID: ***L79290-01***
Date Sampled: *11/04/09 09:30*
Date Received: *11/06/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	63.0			mg/L	0.5	3	11/11/09 2:34	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-02A

ACZ Sample ID: ***L79290-02***
Date Sampled: *11/04/09 12:48*
Date Received: *11/06/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	21.8			mg/L	0.5	3	11/11/09 2:55	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BF-01

ACZ Sample ID: ***L79290-03***
Date Sampled: *11/04/09 14:14*
Date Received: *11/06/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1280			mg/L	30	100	11/11/09 18:31	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-08M

ACZ Sample ID: ***L79290-04***
Date Sampled: *11/04/09 14:22*
Date Received: *11/06/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	104			mg/L	2	8	11/11/09 3:37	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79290***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG272406													
WG272406ICV	ICV	10/16/09 15:46	WI091017-1	50.2		49.66	mg/L	98.9	90	110			
WG272406ICB	ICB	10/16/09 16:07				U	mg/L		-1.5	1.5			
WG273873													
WG273873LFB	LFB	11/11/09 0:48	WI091109-1	30		30.11	mg/L	100.4	90	110			
L79261-05DUP	DUP	11/11/09 1:31			14.8	14.77	mg/L				0.2	20	
L79261-06AS	AS	11/11/09 2:13	WI091109-1	30	56.9	84.83	mg/L	93.1	90	110			

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79290***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79290
Date Received: 10:00:01 AM
Received By:
Date Printed: 11/6/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1897	1.7	15

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79290
Date Received: 10:00:01 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79290-01	TM-19A									X		
L79290-02	TM-02A									X		
L79290-03	BF-01									X		
L79290-04	BMO-2008-08M									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L7929D

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? NO

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC							
TM-19A	11-4-09:0930	GW	1	X							
TM-02A	11-4-09:1248	GW	1	X							
BF-01	11-4-09:1414	GW	1	X							
BMO-2008-08M	11-5-09:1422	GW	1	X							

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

REMARKS/ SAMPLE DISCLOSURES

PAGE 1 of 1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	11-5-09:1530	KSJ KSJ 11/6/09	11/6/09 10:00

FRMAD050.03.05.02 White - Return with sample. Yellow - Retain for your records

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

Analytical Report

November 25, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 8720002.2
ACZ Project ID: L79371

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 11, 2009. This project has been assigned to ACZ's project number, L79371. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79371. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after December 25, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: DUP110909

ACZ Sample ID: ***L79371-01***
Date Sampled: *11/09/09 00:00*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1520			mg/L	30	100	11/22/09 20:33	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: EQB110909

ACZ Sample ID: ***L79371-02***
Date Sampled: *11/09/09 00:00*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U		mg/L	0.5	3	11/21/09 10:30	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: FB110909

ACZ Sample ID: ***L79371-03***
Date Sampled: *11/09/09 00:00*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U		mg/L	0.5	3	11/21/09 10:51	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-08B

ACZ Sample ID: ***L79371-04***
Date Sampled: *11/09/09 12:55*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1510			mg/L	30	100	11/22/09 20:55	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: BMO-2008-11G

ACZ Sample ID: ***L79371-05***
Date Sampled: *11/09/09 14:58*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	13.9			mg/L	0.5	3	11/21/09 12:15	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: GL-03

ACZ Sample ID: ***L79371-06***
Date Sampled: *11/10/09 09:50*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	49.0			mg/L	0.5	3	11/21/09 12:36	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-03

ACZ Sample ID: ***L79371-07***
Date Sampled: *11/10/09 13:01*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	106			mg/L	3	10	11/22/09 21:16	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-16

ACZ Sample ID: ***L79371-08***
Date Sampled: *11/10/09 13:55*
Date Received: *11/11/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	505			mg/L	5	30	11/22/09 22:19	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79371***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG274450													
WG274450ICV	ICV	11/18/09 13:15	WI091017-1	50.2		51.4	mg/L	102.4	90	110			
WG274450ICB	ICB	11/18/09 13:36				U	mg/L		-1.5	1.5			
WG274552													
WG274552ICV	ICV	11/18/09 13:15	WI091017-1	50.2		51.4	mg/L	102.4	90	110			
WG274552ICB	ICB	11/18/09 13:36				U	mg/L		-1.5	1.5			
WG274552LFB	LFB	11/21/09 3:27	WI091109-1	30		28.03	mg/L	93.4	90	110			
L79277-02DUP	DUP	11/21/09 9:05			37.8	37.74	mg/L				0.2	20	
L79278-01AS	AS	11/21/09 9:47	WI091109-1	30	24	56.31	mg/L	107.7	90	110			
WG274552LFB	LFB	11/22/09 13:52	WI091109-1	30		29.07	mg/L	96.9	90	110			

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79371***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Certification Qualifiers

Hydro Geo Chem, Inc. ACZ Project ID: ***L79371***

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79371
Date Received: 11/11/09 0:00
Received By: lcp
Date Printed: 11/11/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
na9742		2.7	13

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L79371
Date Received: 11/11/09 0:00
Received By: lcp

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79371-01	DUP110909									X		
L79371-02	EQB110909									X		
L79371-03	FB110909									X		
L79371-04	BMO-2008-08B									X		
L79371-05	BMO-2008-11G									X		
L79371-06	GL-03									X		
L79371-07	TM-03									X		
L79371-08	TM-16									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: lcp

ACZ Laboratories, Inc. L79371

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson	Address: 51 W. Wetmore Rd Tucson, AZ 85705
Company: Hydro Geo Chem, Inc	
E-mail:	Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris	E-mail: jimn@hgcinc.com
Company: HGC, Inc	Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson	Address: 51 W. Wetmore Rd Tucson, AZ 85705
Company: HGC, Inc	
E-mail:	Telephone: 520-293-1500 x-133

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

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

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

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

PROJECT INFORMATION

Quote #: 504-IC

Project/PO #: 8720002.2

Reporting state for compliance testing: AZ

Sampler's Name: Travis Taylor

Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC							
DUP110909	11-9-09:	GW	1	X							
EQB110909	11-9-09:	GW	1	X							
FB110909	11-9-09:	GW	1	X							
BMO-2008-08B	11-9-09: 1255	GW	1	X							
BMO-2008-11G	11-9-09: 1458	GW	1	X							
GL-03	11-10-09: 0950	GW	1	X							
TM-03	11-10-09: 1301	GW	1	X							
TM-16	11-10-09: 1355	GW	1	X							

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

REMARKS

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	11-10-09: 1530		11-11-09 10:09

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

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

Analytical Report

December 02, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

Project ID: 8720002.2
ACZ Project ID: L79426

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 13, 2009. This project has been assigned to ACZ's project number, L79426. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79426. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 02, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: GGOOSE 547

ACZ Sample ID: ***L79426-01***
Date Sampled: *11/11/09 15:56*
Date Received: *11/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	188			mg/L	3	10	12/01/09 3:02	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: TM-06 MILLER

ACZ Sample ID: ***L79426-02***
Date Sampled: *11/12/09 10:34*
Date Received: *11/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	31.1			mg/L	0.5	3	12/01/09 4:05	aml

Arizona license number: AZ0102

Hydro Geo Chem, Inc.
Project ID: 8720002.2
Sample ID: NESS

ACZ Sample ID: ***L79426-03***
Date Sampled: *11/12/09 12:40*
Date Received: *11/13/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	51.3			mg/L	0.5	3	12/01/09 4:26	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 8720002.2

ACZ Project ID: ***L79426***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG274850													
WG274850ICV	ICV	11/25/09 14:50	WI091017-1	50.2		49.54	mg/L	98.7	90	110			
WG274850ICB	ICB	11/25/09 15:11				U	mg/L		-1.5	1.5			
WG274851													
WG274851ICV	ICV	11/25/09 14:50	WI091017-1	50.2		49.54	mg/L	98.7	90	110			
WG274851ICB	ICB	11/25/09 15:11				U	mg/L		-1.5	1.5			
WG274851LFB	LFB	11/30/09 23:52	WI091109-1	30		32.67	mg/L	108.9	90	110			
L79295-01DUP	DUP	12/01/09 0:34			30.6	30.66	mg/L				0.2	20	
L79295-02AS	AS	12/01/09 1:16	WI091109-1	30	30.6	58.57	mg/L	93.2	90	110			

ACZ Laboratories, Inc.
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Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79426***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79426
Date Received: 10:34:39 AM
Received By:
Date Printed: 11/13/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na9773	0.5	14

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79426
Date Received: 10:34:39 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79426-01	GGOOSE 547									X		
L79426-02	TM-06 MILLER									X		
L79426-03	NESS									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L79426

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 87200021.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
GGOOSE 547	11-11-09:1556	GW	1	X
TM-06 MILLER	11-12-09:1034	GW	1	X
NESS	11-12-09:1240	GW	1	X

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

REMARKS

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	11-12-09:1430		
		11/12/09	10:34

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

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

Analytical Report

December 08, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

cc: Jim Norris

Project ID: 872000 5.0
ACZ Project ID: L79527

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 19, 2009. This project has been assigned to ACZ's project number, L79527. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79527. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 08, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 872000 5.0
Sample ID: NWC-04

ACZ Sample ID: ***L79527-01***
Date Sampled: *11/18/09 10:27*
Date Received: *11/19/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	191			mg/L	2	8	12/07/09 13:30	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 872000 5.0

ACZ Project ID: ***L79527***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG274850													
WG274850ICV	ICV	11/25/09 14:50	WI091017-1	50.2		49.54	mg/L	98.7	90	110			
WG274850ICB	ICB	11/25/09 15:11				U	mg/L		-1.5	1.5			
WG275044													
WG275044LFB	LFB	12/04/09 16:51	WI091109-1	30		28.32	mg/L	94.4	90	110			
L79424-01AS	AS	12/04/09 17:33	WI091109-1	30	10.7	41.27	mg/L	101.9	90	110			
L79424-01DUP	DUP	12/04/09 17:54			10.7	10.81	mg/L				1	20	

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79527***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

No certification qualifiers associated with this analysis

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

Sample Receipt

Hydro Geo Chem, Inc.
872000 5.0

ACZ Project ID: L79527
Date Received: 11/19/09 0:00
Received By: gac
Date Printed: 11/20/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA9812		2.7	15

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.
872000 5.0

ACZ Project ID: L79527
Date Received: 11/19/09 0:00
Received By: gac

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79527-01	NWC-04									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

ACZ Laboratories, Inc. L79527

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name: Jim Norris
Company: HGC, Inc

E-mail: Jimn@hgcinc.com
Telephone: 520-293-1500 x-112

Invoice to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:

Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 872000 5.0
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
NWC-04	11-18-09:1027	GW	1	X

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

REMARKS

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	11-18-09:1132		11/19/09 10:34

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

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

Analytical Report

December 22, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

Project ID: 87200005.0
ACZ Project ID: L79940

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 17, 2009. This project has been assigned to ACZ's project number, L79940. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79940. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 22, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 87200005.0
Sample ID: NWC-04

ACZ Sample ID: ***L79940-01***
Date Sampled: *12/16/09 11:29*
Date Received: *12/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	193		*	mg/L	5	30	12/21/09 14:30	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 87200005.0

ACZ Project ID: ***L79940***

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275961													
WG275961ICB	ICB	12/21/09 11:46				U	mg/L		-3	3			
WG275961ICV	ICV	12/21/09 11:46	WI091221-2	20.08		21.1	mg/L	105.1	90	110			
WG275961LFB	LFB	12/21/09 14:23	WI091020-3	10		9.4	mg/L	94	90	110			
L79936-01AS	AS	12/21/09 14:35	SO4TURB20	10	760	752	mg/L	-80	90	110			M3
L79813-03DUP	DUP	12/21/09 15:18			330	350	mg/L				5.9	20	

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79940***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79940-01	WG275961	Sulfate	375.4 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Hydro Geo Chem, Inc. ACZ Project ID: ***L79940***

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79940
Date Received: 11:30:26 AM
Received By:
Date Printed: 12/17/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA9978	4	17

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79940
Date Received: 11:30:26 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79940-01	NWC-04									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. C79946

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc.
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 x-133

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

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

PROJECT INFORMATION

Quote #: ~~8720000 5.0~~ 504-IC
Project/PO #: 8720000 5.0
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC							
NWC-04	12-16-09 1129	GW	1	X							

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

REMARKS

1 Week Turn Around
Monthly Sulfate Trend Sampling

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	12-16-09 1385	[signature]	12-17-09 11:30

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

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

Analytical Report

December 22, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

Project ID: 87200002.2
ACZ Project ID: L79941

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 17, 2009. This project has been assigned to ACZ's project number, L79941. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79941. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 22, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Hydro Geo Chem, Inc.
Project ID: 87200002.2
Sample ID: BURKE

ACZ Sample ID: ***L79941-01***
Date Sampled: *12/16/09 12:38*
Date Received: *12/17/09*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	375.4 - Turbidimetric	26		*	mg/L	1	5	12/21/09 14:23	aml

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc.
Project ID: 87200002.2

ACZ Project ID: ***L79941***

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275961													
WG275961ICB	ICB	12/21/09 11:46				U	mg/L		-3	3			
WG275961ICV	ICV	12/21/09 11:46	WI091221-2	20.08		21.1	mg/L	105.1	90	110			
WG275961LFB	LFB	12/21/09 14:23	WI091020-3	10		9.4	mg/L	94	90	110			
L79936-01AS	AS	12/21/09 14:35	SO4TURB20	10	760	752	mg/L	-80	90	110			M3
L79813-03DUP	DUP	12/21/09 15:18			330	350	mg/L				5.9	20	

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79941***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79941-01	WG275961	Sulfate	375.4 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Hydro Geo Chem, Inc. ACZ Project ID: ***L79941***

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79941
Date Received: 11:30:26 AM
Received By:
Date Printed: 12/17/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA9978	4	17

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79941
Date Received: 11:30:26 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79941-01	BURKE									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. L79941

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc.
E-mail:
Address: 51 W. Wetmore Rd Tucson, AZ 85705
Telephone: 520-293-1500 X-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd Tucson, AZ 85705
Telephone: 520-293-1500 X-133

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

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

PROJECT INFORMATION

Quote #: 504-IC
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	504-IC
BURKE	12-16-09:1238	GW	1	X

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

REMARKS

1 week Turn Around

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	12-16-09:1305		12-17-09 11:20

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

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

Analytical Report

December 28, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

Project ID: 87200002.2
ACZ Project ID: L79992

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 19, 2009. This project has been assigned to ACZ's project number, L79992. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79992. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 28, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 87200002.2
Sample ID: FULLER

ACZ Sample ID: ***L79992-01***
Date Sampled: *12/18/09 12:27*
Date Received: *12/19/09*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	206			mg/L	0.2	1	12/22/09 21:10	ear
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/22/09 21:10	ear
Magnesium, dissolved	M200.7 ICP	31.1			mg/L	0.2	1	12/22/09 21:10	ear
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	12/22/09 21:10	ear
Potassium, dissolved	M200.7 ICP	3.5			mg/L	0.3	2	12/22/09 21:10	ear
Sodium, dissolved	M200.7 ICP	46.4			mg/L	0.3	2	12/22/09 21:10	ear

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		193			mg/L	2	20	12/21/09 0:00	abm
Carbonate as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Hydroxide as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Total Alkalinity		193			mg/L	2	20	12/21/09 0:00	abm
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.7			%			12/23/09 0:00	calc
Sum of Anions		14.8			meq/L	0.1	0.5	12/23/09 0:00	calc
Sum of Cations		15.0			meq/L	0.1	0.5	12/23/09 0:00	calc
Chloride	SM4500Cl-E	35		*	mg/L	1	5	12/21/09 15:55	aml
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	12/21/09 15:32	abm
Lab Filtration	SM 3030 B			*				12/21/09 15:51	jjc
Lab Filtration & Acidification	SM 3030 B			*				12/21/09 11:39	scp
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	3.86			mg/L	0.02	0.1	12/23/09 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	3.86		*	mg/L	0.02	0.1	12/19/09 14:21	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	12/19/09 14:21	pjb
Residue, Filterable (TDS) @180C	SM2540C	1000			mg/L	10	20	12/21/09 12:43	abm
Sulfate	375.4 - Turbidimetric	460		*	mg/L	20	100	12/21/09 14:35	aml
TDS (calculated)	Calculation	915			mg/L	10	50	12/23/09 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						12/23/09 0:00	calc

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 87200002.2
Sample ID: LOPEZ

ACZ Sample ID: ***L79992-02***
Date Sampled: *12/18/09 13:13*
Date Received: *12/19/09*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	208			mg/L	0.2	1	12/22/09 21:13	ear
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/22/09 21:13	ear
Magnesium, dissolved	M200.7 ICP	31.6			mg/L	0.2	1	12/22/09 21:13	ear
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	12/22/09 21:13	ear
Potassium, dissolved	M200.7 ICP	3.4			mg/L	0.3	2	12/22/09 21:13	ear
Sodium, dissolved	M200.7 ICP	45.7			mg/L	0.3	2	12/22/09 21:13	ear

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		193			mg/L	2	20	12/21/09 0:00	abm
Carbonate as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Hydroxide as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Total Alkalinity		193			mg/L	2	20	12/21/09 0:00	abm
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.0			%			12/23/09 0:00	calc
Sum of Anions		14.5			meq/L	0.1	0.5	12/23/09 0:00	calc
Sum of Cations		15.1			meq/L	0.1	0.5	12/23/09 0:00	calc
Chloride	SM4500Cl-E	34		*	mg/L	1	5	12/21/09 15:55	aml
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	12/21/09 15:36	abm
Lab Filtration	SM 3030 B			*				12/21/09 15:52	jjc
Lab Filtration & Acidification	SM 3030 B			*				12/21/09 11:40	scp
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	3.85			mg/L	0.02	0.1	12/23/09 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	3.85		*	mg/L	0.02	0.1	12/19/09 14:23	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	12/19/09 14:23	pjb
Residue, Filterable (TDS) @180C	SM2540C	1010			mg/L	10	20	12/21/09 12:43	abm
Sulfate	375.4 - Turbidimetric	450		*	mg/L	20	100	12/21/09 14:35	aml
TDS (calculated)	Calculation	906			mg/L	10	50	12/23/09 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.11						12/23/09 0:00	calc

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 87200002.2
Sample ID: MODENA

ACZ Sample ID: ***L79992-03***
Date Sampled: *12/18/09 14:44*
Date Received: *12/19/09*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	207			mg/L	0.2	1	12/22/09 21:17	ear
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/22/09 21:17	ear
Magnesium, dissolved	M200.7 ICP	31.6			mg/L	0.2	1	12/22/09 21:17	ear
Manganese, dissolved	M200.7 ICP	0.014	B		mg/L	0.005	0.03	12/22/09 21:17	ear
Potassium, dissolved	M200.7 ICP	3.6			mg/L	0.3	2	12/22/09 21:17	ear
Sodium, dissolved	M200.7 ICP	45.3			mg/L	0.3	2	12/22/09 21:17	ear

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		192			mg/L	2	20	12/21/09 0:00	abm
Carbonate as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Hydroxide as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Total Alkalinity		192			mg/L	2	20	12/21/09 0:00	abm
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.3			%			12/23/09 0:00	calc
Sum of Anions		14.9			meq/L	0.1	0.5	12/23/09 0:00	calc
Sum of Cations		15.0			meq/L	0.1	0.5	12/23/09 0:00	calc
Chloride	SM4500Cl-E	34		*	mg/L	1	5	12/21/09 15:55	aml
Fluoride	SM4500F-C	0.1	B		mg/L	0.1	0.5	12/21/09 15:51	abm
Lab Filtration	SM 3030 B			*				12/21/09 15:53	jjc
Lab Filtration & Acidification	SM 3030 B			*				12/21/09 11:40	scp
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	3.86			mg/L	0.02	0.1	12/23/09 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	3.86		*	mg/L	0.02	0.1	12/19/09 14:24	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	12/19/09 14:24	pjb
Residue, Filterable (TDS) @180C	SM2540C	1010			mg/L	10	20	12/21/09 12:44	abm
Sulfate	375.4 - Turbidimetric	470		*	mg/L	20	100	12/21/09 14:35	aml
TDS (calculated)	Calculation	924			mg/L	10	50	12/23/09 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						12/23/09 0:00	calc

Arizona license number: AZ0102

** Please refer to Qualifier Reports for details.*

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

Inorganic Reference

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

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

Inorganic QC Summary

Hydro Geo Chem, Inc.
Project ID: 87200002.2

ACZ Project ID: ***L79992***

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276005													
WG276005PBW1	PBW	12/21/09 16:54				U	mg/L		-20	20			
WG276005LCSW2	LCSW	12/21/09 17:07	WC091208-1	820.0001		810.5	mg/L	98.8	90	110			
WG276005PBW2	PBW	12/21/09 21:46				U	mg/L		-20	20			
WG276005LCSW5	LCSW	12/21/09 22:00	WC091208-1	820.0001		826.1	mg/L	100.7	90	110			
L79993-01DUP	DUP	12/21/09 23:34			191	192.3	mg/L				0.7	20	
WG276005LCSW8	LCSW	12/22/09 0:47	WC091208-1	820.0001		837.5	mg/L	102.1	90	110			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276043													
WG276043ICV	ICV	12/22/09 19:35	II091007-1	100		99.13	mg/L	99.1	95	105			
WG276043ICB	ICB	12/22/09 19:39				U	mg/L		-0.6	0.6			
WG276043LFB	LFB	12/22/09 19:51	II091201-2	68.0028		73.23	mg/L	107.7	85	115			
L79943-05AS	AS	12/22/09 20:40	II091201-2	68.0028	47.7	118.43	mg/L	104	85	115			
L79943-05ASD	ASD	12/22/09 20:43	II091201-2	68.0028	47.7	120.55	mg/L	107.1	85	115	1.77	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275962													
WG275962ICB	ICB	12/21/09 11:46				U	mg/L		-3	3			
WG275962ICV	ICV	12/21/09 11:46	WI091019-2	54.835		58.5	mg/L	106.7	90	110			
WG275962LFB1	LFB	12/21/09 15:45	WI091019-4	30		33.1	mg/L	110.3	90	110			
WG275962LFB2	LFB	12/21/09 15:49	WI091019-4	30		33.1	mg/L	110.3	90	110			
L79943-04DUP	DUP	12/21/09 15:49			14	13.8	mg/L				1.4	20	
L79943-03AS	AS	12/21/09 16:03	10XCL	30	140	175	mg/L	116.7	90	110			M1

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275963													
WG275963ICV	ICV	12/21/09 11:41	WC091215-1	2		1.98	mg/L	99	95	105			
WG275963ICB	ICB	12/21/09 11:49				U	mg/L		-0.3	0.3			
WG275963LFB1	LFB	12/21/09 11:56	WC090302-4	5		5.19	mg/L	103.8	90	110			
WG275963LFB2	LFB	12/21/09 13:57	WC090302-4	5		5.09	mg/L	101.8	90	110			
L79976-01AS	AS	12/21/09 15:07	WC090302-4	100	143	234.2	mg/L	91.2	90	110			
L79976-01DUP	DUP	12/21/09 15:10			143	141.4	mg/L				1.1	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276043													
WG276043ICV	ICV	12/22/09 19:35	II091007-1	2		1.929	mg/L	96.5	95	105			
WG276043ICB	ICB	12/22/09 19:39				U	mg/L		-0.06	0.06			
WG276043LFB	LFB	12/22/09 19:51	II091201-2	1		1.028	mg/L	102.8	85	115			
L79943-05AS	AS	12/22/09 20:40	II091201-2	1	U	1.006	mg/L	100.6	85	115			
L79943-05ASD	ASD	12/22/09 20:43	II091201-2	1	U	1.085	mg/L	108.5	85	115	7.56	20	

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

Inorganic QC Summary

Hydro Geo Chem, Inc.
Project ID: 87200002.2

ACZ Project ID: ***L79992***

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276043													
WG276043ICV	ICV	12/22/09 19:35	II091007-1	100		101.8	mg/L	101.8	95	105			
WG276043ICB	ICB	12/22/09 19:39				U	mg/L		-0.6	0.6			
WG276043LFB	LFB	12/22/09 19:51	II091201-2	50.0051		54.16	mg/L	108.3	85	115			
L79943-05AS	AS	12/22/09 20:40	II091201-2	50.0051	62.4	116.4	mg/L	108	85	115			
L79943-05ASD	ASD	12/22/09 20:43	II091201-2	50.0051	62.4	118.92	mg/L	113	85	115	2.14	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276043													
WG276043ICV	ICV	12/22/09 19:35	II091007-1	2		1.9363	mg/L	96.8	95	105			
WG276043ICB	ICB	12/22/09 19:39				U	mg/L		-0.015	0.015			
WG276043LFB	LFB	12/22/09 19:51	II091201-2	.5		.5345	mg/L	106.9	85	115			
L79943-05AS	AS	12/22/09 20:40	II091201-2	.5	.046	.5724	mg/L	105.3	85	115			
L79943-05ASD	ASD	12/22/09 20:43	II091201-2	.5	.046	.6073	mg/L	112.3	85	115	5.92	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275935													
WG275935ICV	ICV	12/19/09 13:24	WI090919-2	2.416		2.324	mg/L	96.2	90	110			
WG275935ICB	ICB	12/19/09 13:26				U	mg/L		-0.06	0.06			
WG275935LFB	LFB	12/19/09 13:30	WI090918-6	2		1.962	mg/L	98.1	90	110			
L79989-02DUP	DUP	12/19/09 14:14			U	U	mg/L				0	20	RA
L79989-01AS	AS	12/19/09 14:43	WI090918-6	2	.07	1.99	mg/L	96	90	110			

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275935													
WG275935ICV	ICV	12/19/09 13:24	WI090919-2	.609		.597	mg/L	98	90	110			
WG275935ICB	ICB	12/19/09 13:26				U	mg/L		-0.03	0.03			
WG275935LFB	LFB	12/19/09 13:30	WI090918-6	1		.974	mg/L	97.4	90	110			
L79989-01AS	AS	12/19/09 14:11	WI090918-6	1	.02	.984	mg/L	96.4	90	110			
L79989-02DUP	DUP	12/19/09 14:14			U	U	mg/L				0	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276043													
WG276043ICV	ICV	12/22/09 19:35	II091007-1	20		19.9	mg/L	99.5	95	105			
WG276043ICB	ICB	12/22/09 19:39				U	mg/L		-0.9	0.9			
WG276043LFB	LFB	12/22/09 19:51	II091201-2	99.96112		107.45	mg/L	107.5	85	115			
L79943-05AS	AS	12/22/09 20:40	II091201-2	99.96112	1.7	109.4	mg/L	107.7	85	115			
L79943-05ASD	ASD	12/22/09 20:43	II091201-2	99.96112	1.7	110.08	mg/L	108.4	85	115	0.62	20	

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

Inorganic QC Summary

Hydro Geo Chem, Inc.
Project ID: 87200002.2

ACZ Project ID: ***L79992***

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275972													
WG275972PBW	PBW	12/21/09 12:30				U	mg/L		-20	20			
WG275972LCSW	LCSW	12/21/09 12:30	PCN33552	260		258	mg/L	99.2	80	120			
L79995-07DUP	DUP	12/21/09 12:49			3660	3654	mg/L				0.2	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276043													
WG276043ICV	ICV	12/22/09 19:35	II091007-1	100		99.88	mg/L	99.9	95	105			
WG276043ICB	ICB	12/22/09 19:39				U	mg/L		-0.9	0.9			
WG276043LFB	LFB	12/22/09 19:51	II091201-2	100.018		106.72	mg/L	106.7	85	115			
L79943-05AS	AS	12/22/09 20:40	II091201-2	100.018	203	294.64	mg/L	91.6	85	115			
L79943-05ASD	ASD	12/22/09 20:43	II091201-2	100.018	203	297.58	mg/L	94.6	85	115	0.99	20	

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275961													
WG275961ICB	ICB	12/21/09 11:46				U	mg/L		-3	3			
WG275961ICV	ICV	12/21/09 11:46	WI091221-2	20.08		21.1	mg/L	105.1	90	110			
WG275961LFB	LFB	12/21/09 14:23	WI091020-3	10		9.4	mg/L	94	90	110			
L79944-01DUP	DUP	12/21/09 14:32			162	162.3	mg/L				0.2	20	
L79945-01AS	AS	12/21/09 14:33	SO4TURB5	10	160	168.2	mg/L	82	90	110			M2

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79992***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79992-01	WG275962	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG275935	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG275961	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L79992-02	WG275962	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG275935	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG275961	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L79992-03	WG275962	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG275935	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG275961	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

ACZ Laboratories, Inc.
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Certification Qualifiers

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79992***

Wet Chemistry

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.		
	Lab Filtration	SM 3030 B
	Lab Filtration & Acidification	SM 3030 B
	Sulfate	375.4 - Turbidimetric
The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.		
	Lab Filtration	SM 3030 B
	Lab Filtration & Acidification	SM 3030 B

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79992
Date Received: 11:32:22 AM
Received By:
Date Printed: 12/19/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA9994	0.6	15

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79992
Date Received: 11:32:22 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79992-01	FULLER									X		
L79992-02	LOPEZ									X		
L79992-03	MODENA									X		

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. (79992

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd
Tucson, AZ 85705
Telephone: 520-293-1500 X-133

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

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

PROJECT INFORMATION

Quote #: FMCQB-GW
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	FMCQB-GW	Add FE & MN						
FULLER	12-18-09:1227	GW	3	X	X						
LOPEZ	12-18-09:1313	GW	3	X	X						
MODENA	12-18-09:1444	GW	3	X	X						

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

REMARKS

Results ASAP.

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	12-17-09:1530	[signature]	12-19-09 11:32

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

Analytical Report

December 28, 2009

Report to:
Dan Simpson
Hydro Geo Chem, Inc.
51 West Wetmore Road Suite 101
Tuscon, AZ 85705

Bill to:
Accounts Payable
Hydro Geo Chem, Inc.
P. O. Box 97220
Phoenix, AZ 85060

Project ID: 87200002.2
ACZ Project ID: L79993

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 19, 2009. This project has been assigned to ACZ's project number, L79993. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L79993. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 28, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.
Project ID: 87200002.2
Sample ID: NWC-03

ACZ Sample ID: ***L79993-01***
Date Sampled: *12/18/09 13:42*
Date Received: *12/19/09*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	210			mg/L	0.2	1	12/21/09 20:13	ear
Iron, dissolved	M200.7 ICP	0.03	B		mg/L	0.02	0.05	12/21/09 20:13	ear
Magnesium, dissolved	M200.7 ICP	31.4			mg/L	0.2	1	12/22/09 12:34	aeh
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	12/21/09 20:13	ear
Potassium, dissolved	M200.7 ICP	3.5			mg/L	0.3	2	12/21/09 20:13	ear
Sodium, dissolved	M200.7 ICP	44.2			mg/L	0.3	2	12/21/09 20:13	ear

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		191			mg/L	2	20	12/21/09 0:00	abm
Carbonate as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Hydroxide as CaCO3			U		mg/L	2	20	12/21/09 0:00	abm
Total Alkalinity		191			mg/L	2	20	12/21/09 0:00	abm
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.0			%			12/23/09 0:00	calc
Sum of Anions		14.5			meq/L	0.1	0.5	12/23/09 0:00	calc
Sum of Cations		15.1			meq/L	0.1	0.5	12/23/09 0:00	calc
Chloride	SM4500Cl-E	33		*	mg/L	1	5	12/21/09 15:55	aml
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	12/21/09 15:55	abm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	3.95			mg/L	0.02	0.1	12/23/09 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	3.95		*	mg/L	0.02	0.1	12/19/09 14:25	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	12/19/09 14:25	pjb
Residue, Filterable (TDS) @180C	SM2540C	1000			mg/L	10	20	12/21/09 12:45	abm
Sulfate	375.4 - Turbidimetric	450		*	mg/L	20	100	12/21/09 14:36	aml
TDS (calculated)	Calculation	904			mg/L	10	50	12/23/09 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.11						12/23/09 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

Hydro Geo Chem, Inc. ACZ Project ID: ***L79993***

Project ID: 87200002.2

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276005													
WG276005PBW1	PBW	12/21/09 16:54				U	mg/L		-20	20			
WG276005LCSW2	LCSW	12/21/09 17:07	WC091208-1	820.0001		810.5	mg/L	98.8	90	110			
WG276005PBW2	PBW	12/21/09 21:46				U	mg/L		-20	20			
WG276005LCSW5	LCSW	12/21/09 22:00	WC091208-1	820.0001		826.1	mg/L	100.7	90	110			
L79993-01DUP	DUP	12/21/09 23:34			191	192.3	mg/L				0.7	20	
WG276005LCSW8	LCSW	12/22/09 0:47	WC091208-1	820.0001		837.5	mg/L	102.1	90	110			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275977													
WG275977ICV	ICV	12/21/09 18:31	II091007-1	100		99.16	mg/L	99.2	95	105			
WG275977ICB	ICB	12/21/09 18:35				U	mg/L		-0.6	0.6			
WG275977LFB	LFB	12/21/09 18:47	II091201-2	68.0028		72.09	mg/L	106	85	115			
L79908-05AS	AS	12/21/09 19:36	II091201-2	68.0028	83.7	154.54	mg/L	104.2	85	115			
L79908-05ASD	ASD	12/21/09 19:39	II091201-2	68.0028	83.7	154.42	mg/L	104	85	115	0.08	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275962													
WG275962ICB	ICB	12/21/09 11:46				U	mg/L		-3	3			
WG275962ICV	ICV	12/21/09 11:46	WI091019-2	54.835		58.5	mg/L	106.7	90	110			
WG275962LFB1	LFB	12/21/09 15:45	WI091019-4	30		33.1	mg/L	110.3	90	110			
WG275962LFB2	LFB	12/21/09 15:49	WI091019-4	30		33.1	mg/L	110.3	90	110			
L79943-04DUP	DUP	12/21/09 15:49			14	13.8	mg/L				1.4	20	
L79943-03AS	AS	12/21/09 16:03	10XCL	30	140	175	mg/L	116.7	90	110			M1

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275963													
WG275963ICV	ICV	12/21/09 11:41	WC091215-1	2		1.98	mg/L	99	95	105			
WG275963ICB	ICB	12/21/09 11:49				U	mg/L		-0.3	0.3			
WG275963LFB1	LFB	12/21/09 11:56	WC090302-4	5		5.19	mg/L	103.8	90	110			
WG275963LFB2	LFB	12/21/09 13:57	WC090302-4	5		5.09	mg/L	101.8	90	110			
L79976-01AS	AS	12/21/09 15:07	WC090302-4	100	143	234.2	mg/L	91.2	90	110			
L79976-01DUP	DUP	12/21/09 15:10			143	141.4	mg/L				1.1	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275977													
WG275977ICV	ICV	12/21/09 18:31	II091007-1	2		1.955	mg/L	97.8	95	105			
WG275977ICB	ICB	12/21/09 18:35				U	mg/L		-0.06	0.06			
WG275977LFB	LFB	12/21/09 18:47	II091201-2	1		1.035	mg/L	103.5	85	115			
L79908-05AS	AS	12/21/09 19:36	II091201-2	1	.12	1.226	mg/L	110.6	85	115			
L79908-05ASD	ASD	12/21/09 19:39	II091201-2	1	.12	1.215	mg/L	109.5	85	115	0.9	20	

Hydro Geo Chem, Inc. ACZ Project ID: ***L79993***

Project ID: 87200002.2

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG276022													
WG276022ICV	ICV	12/22/09 11:14	II091007-1	100		101.01	mg/L	101	95	105			
WG276022ICB	ICB	12/22/09 11:18				U	mg/L		-0.6	0.6			
WG276022LFB	LFB	12/22/09 11:30	II091201-2	50.0051		51.85	mg/L	103.7	85	115			
L79887-02AS	AS	12/22/09 12:15	II091201-2	50.0051	9.3	62.69	mg/L	106.8	85	115			
L79887-02ASD	ASD	12/22/09 12:18	II091201-2	50.0051	9.3	62.23	mg/L	105.8	85	115	0.74	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275977													
WG275977ICV	ICV	12/21/09 18:31	II091007-1	2		1.9504	mg/L	97.5	95	105			
WG275977ICB	ICB	12/21/09 18:35				U	mg/L		-0.015	0.015			
WG275977LFB	LFB	12/21/09 18:47	II091201-2	.5		.5423	mg/L	108.5	85	115			
L79908-05AS	AS	12/21/09 19:36	II091201-2	.5	.021	.5862	mg/L	113	85	115			
L79908-05ASD	ASD	12/21/09 19:39	II091201-2	.5	.021	.5823	mg/L	112.3	85	115	0.67	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275935													
WG275935ICV	ICV	12/19/09 13:24	WI090919-2	2.416		2.324	mg/L	96.2	90	110			
WG275935ICB	ICB	12/19/09 13:26				U	mg/L		-0.06	0.06			
WG275935LFB	LFB	12/19/09 13:30	WI090918-6	2		1.962	mg/L	98.1	90	110			
L79989-02DUP	DUP	12/19/09 14:14			U	U	mg/L				0	20	RA
L79989-01AS	AS	12/19/09 14:43	WI090918-6	2	.07	1.99	mg/L	96	90	110			

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275935													
WG275935ICV	ICV	12/19/09 13:24	WI090919-2	.609		.597	mg/L	98	90	110			
WG275935ICB	ICB	12/19/09 13:26				U	mg/L		-0.03	0.03			
WG275935LFB	LFB	12/19/09 13:30	WI090918-6	1		.974	mg/L	97.4	90	110			
L79989-01AS	AS	12/19/09 14:11	WI090918-6	1	.02	.984	mg/L	96.4	90	110			
L79989-02DUP	DUP	12/19/09 14:14			U	U	mg/L				0	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275977													
WG275977ICV	ICV	12/21/09 18:31	II091007-1	20		19.97	mg/L	99.9	95	105			
WG275977ICB	ICB	12/21/09 18:35				U	mg/L		-0.9	0.9			
WG275977LFB	LFB	12/21/09 18:47	II091201-2	99.96112		106.66	mg/L	106.7	85	115			
L79908-05AS	AS	12/21/09 19:36	II091201-2	99.96112	9.2	116.28	mg/L	107.1	85	115			
L79908-05ASD	ASD	12/21/09 19:39	II091201-2	99.96112	9.2	115.84	mg/L	106.7	85	115	0.38	20	

Hydro Geo Chem, Inc. ACZ Project ID: ***L79993***

Project ID: 87200002.2

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275972													
WG275972PBW	PBW	12/21/09 12:30				U	mg/L		-20	20			
WG275972LCSW	LCSW	12/21/09 12:30	PCN33552	260		258	mg/L	99.2	80	120			
L79995-07DUP	DUP	12/21/09 12:49			3660	3654	mg/L				0.2	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275977													
WG275977ICV	ICV	12/21/09 18:31	II091007-1	100		100.15	mg/L	100.2	95	105			
WG275977ICB	ICB	12/21/09 18:35				U	mg/L		-0.9	0.9			
WG275977LFB	LFB	12/21/09 18:47	II091201-2	100.018		106.29	mg/L	106.3	85	115			
L79908-05AS	AS	12/21/09 19:36	II091201-2	100.018	52.3	155.96	mg/L	103.6	85	115			
L79908-05ASD	ASD	12/21/09 19:39	II091201-2	100.018	52.3	155.14	mg/L	102.8	85	115	0.53	20	

Sulfate 375.4 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG275961													
WG275961ICB	ICB	12/21/09 11:46				U	mg/L		-3	3			
WG275961ICV	ICV	12/21/09 11:46	WI091221-2	20.08		21.1	mg/L	105.1	90	110			
WG275961LFB	LFB	12/21/09 14:23	WI091020-3	10		9.4	mg/L	94	90	110			
L79944-01DUP	DUP	12/21/09 14:32			162	162.3	mg/L				0.2	20	
L79945-01AS	AS	12/21/09 14:33	SO4TURB5	10	160	168.2	mg/L	82	90	110			M2

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

Inorganic Extended Qualifier Report

Hydro Geo Chem, Inc.

ACZ Project ID: ***L79993***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79993-01	WG275962	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG275935	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG275961	Sulfate	375.4 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Hydro Geo Chem, Inc. ACZ Project ID: ***L79993***

Wet Chemistry

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

Sulfate	375.4 - Turbidimetric

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79993
Date Received: 11:32:22 AM
Received By:
Date Printed: 12/19/2009

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA9994	0.6	15

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

Notes

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

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L79993
Date Received: 11:32:22 AM
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L79993-01	NWC-03		Y									

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc. C79993

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

CHAIN of CUSTODY

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail:
Address: 51 W Wetmore Rd Tucson AZ 85705
Telephone: 520-293-1500 X-133

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: Dan Simpson
Company: HGC, Inc
E-mail:
Address: 51 W. Wetmore Rd Tucson, AZ 85705
Telephone: 520-293-1500 X-133

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

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

PROJECT INFORMATION

Quote #: FMCQB-GW
Project/PO #: 8720000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? Yes (No)

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	FMCQB-GW	Add FE & MN						
NWC-03	12-18-09:1342	GW	3	X	X						

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

REMARKS

Results ASAP.

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Travis Taylor	12-18-09:1530		
			12-19-09 11:32

APPENDIX D

GROUNDWATER SAMPLING FORMS

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-12-09
Well ID:	ANDERSON	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	236'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	147.31'
Casing Volume (gals):	131
3 Casing Volumes (gals):	393

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1029							
1043	14	10	140	6.93	21.8	1351	
1053	24	10	240	6.97	21.6	1350	
1103	34	10	340	6.98	21.7	1358	
1109	40	10	400	6.98	21.5	1375	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
ANDERSON	1113	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	AWC-02	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	330'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0938	—	70	—	7.19	21.3	468	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
AWC-02	0942	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: pump has been running all morning.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	AWC-03	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	269'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1012	—	670	—	7.48	21.3	540	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
AWC-03	1014	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: well has been running all morning.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	AWC-04	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	250'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1036							
1037	1	760	760	6.96	21.7	588	
1040	4	760	3040	7.13	21.2	654	
1042	6	760	4560	7.00	21.2	607	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
AWC-04	1044	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	AWC-05	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08
Casing Volume = gallons/foot * water column (feet)	

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
~~0903~~							
0903	—	520	—	7.37	21.1	433	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
AWC-05	0911	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: pump has been on since early morning.

ARIZONA WATER COMPANY

PUMPING LEVEL

☐ APRIL

Division: Bisbee BISBEE

☒ OCTOBER

Year: 2009 2009

WELL # AND NAME	STATIC WATER LEVEL (FT.) (PUMP OFF)	APPROX. LENGTH OF TIME PUMP "OFF" PRIOR TO RECORDING STATIC WATER LEVEL	DYNAMIC WATER LEVEL (FT.) (PUMP ON)	PUMP DISCHARGE (GPM)	APPROX. LENGTH OF TIME PUMP "ON" PRIOR TO RECORDING DYNAMIC WATER LEVEL
#2 - Naco DWR #55-616586	117'	5 HRS	180'	75	5+ HRS
#3 - Naco Power DWR #55-616585	116'	5 HRS	176'	680	5+ HRS
#4 - Naco Power Plant DWR #55-616584	110'	20 HRS	132'	780	4+ HRS
#5 - Naco DWR #55-590620	289'	6 HRS	364'	520	5+ HRS

AFH

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	BANKS 986	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	435'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0939							
0949	10	8	80	7.35	22.0	957	
0954	15	8		7.47	22.2	844	
0959	20	8	160	7.50	22.3	834	
1004	25	8	160	7.50	22.2	838	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BANKS 986	1008	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * obstruction in well, will purge til parameters are stable.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	BANKS 987	Weather:	cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	339'
Casing Diameter (in):	
Static Water Level (ft bmp):	236.71'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-4-09
Well ID:	BF-01	Weather:	Sunny, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	400'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	348.65'
Casing Volume (gals):	34
3 Casing Volumes (gals):	102

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1336							
1337	1	7	7	6.08	22.4	2841	
1340	4	7	28	6.12	22.2	2853	well dry
~~1344~~							
1400	→	—	—	—	—	—	Pump on
1405	5	7	35	6.24	23.0	2846	Well dry

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BF-01	1414	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-05-09
Well ID:	BIMA	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	465'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	370.11'
Casing Volume (gals):	62
3 Casing Volumes (gals):	186

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1123							
1129	6	10	60	6.16	21.6	1553	
1135	12	10	120	6.33	22.6	1519	
1142	19	10	190	6.34	22.7	1525	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BIMA	1145	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-27-09
Well ID:	BMO-2008-01G	Weather:	Sunny, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	310'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	63.61'
Casing Volume (gals):	252
3 Casing Volumes (gals):	756

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08
Casing Volume = gallons/foot * water column (feet)	

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1011							
1014	3	8	24	7.09	21.9	954	
1034	23	8	184	7.10	21.5	924	
1054	43	8	344	7.13	21.4	953	
1114	63	8	504	7.13	21.7	936	
1134	83	8	664	7.14	21.8	925	
1146	95	8	760	7.11	21.9	922	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-01G	1150	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-26-09
Well ID:	BMO-2008-BB	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	260'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	139.60'
Casing Volume (gals):	123
3 Casing Volumes (gals):	369

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1410							
1416	6	13	78	7.18	22.6	678	
1424	14	13	182	7.29	21.8	681	
1429	19	13	247	7.29	21.8	685	
1434	24	13	312	7.32	21.8	687	
1439	29	13	377	7.32	21.8	684	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-BB	1442	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-27-09
Well ID:	BMO-2008-04B	Weather:	Sunny, Windy, Cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	610'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	132.04'
Casing Volume (gals):	488
3 Casing Volumes (gals):	1464

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1305							
1309	4	16	64	7.65	22.0	326	
1329	24	16	384	7.52	23.1	374	
1349	44	16	704	7.50	23.4	377	
1409	64	16	1024	7.53	23.6	378	
1433	88	16	1408	7.51	23.5	380	
1437	92	16	1472	7.53	23.7	379	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-04B	1442	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-29-09
Well ID:	BMO-2008-05B	Weather:	Sunny, Cold
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	285'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	145.88'
Casing Volume (gals):	142
3 Casing Volumes (gals):	426

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1054							
1101	7	12	84	7.30	21.7	751	
1114	20	12	240	7.17	21.8	730	
1124	30	12	360	7.26	21.7	729	
1130	36	12	432	7.29	21.8	731	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-05B	1133	plastic	250 ml	1	EPA 300.0	none	filtered
DUP102909	1133						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-29-09
Well ID:	BMO-2008-05M	Weather:	Sunny, cold
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	450'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	147.68'
Casing Volume (gals):	309
3 Casing Volumes (gals):	927

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0922							
0935	13	11	143	7.34	21.6	623	
0952	30	11	330	7.31	22.2	609	
1007	45	11	495	7.25	22.3	607	
1022	60	11	660	7.27	22.3	610	
1037	75	11	825	7.29	22.3	608	
1047	85	11	935	7.35	22.4	610	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-05M	1050	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-26-09
Well ID:	BMO-2008-16B	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	265'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	191.04'
Casing Volume (gals):	76
3 Casing Volumes (gals):	228

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1237							
1243	6	5	30	7.15	22.5	378	Brown color
1253	16	5	80	7.24	22.7	421	
1303	26	5	130	7.22	22.6	441	
1313	36	5	180	7.27	22.6	448	
1323	46	5	230	7.29	22.5	448	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-16B	1327	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-26-09
Well ID:	BMO-2008-06M	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	450'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	192.14'
Casing Volume (gals):	264
3 Casing Volumes (gals):	792

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1122							
1132	10	14	140	7.24	22.2	727	
1147	25	14	350	7.24	22.2	722	
1202	40	14	560	7.21	22.2	720	
1219	57	14	798	7.18	22.4	727	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-06M	1223	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-27-09
Well ID:	BMO-2008-DTM	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	670'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	239.55'
Casing Volume (gals):	440
3 Casing Volumes (gals):	1320

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0807							
0817	10	16	160	7.79	21.3	447	
0837	30	16	480	7.54	22.9	467	
0857	50	16	800	7.53	23.0	469	
0917	70	16	1120	7.57	22.9	473	
0930	83	16	1328	7.53	23.0	470	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-DTM	0934	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-9-09
Well ID:	BMO-2008-08B	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	480'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	297.85'
Casing Volume (gals):	186
3 Casing Volumes (gals):	558

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1154							
1204	10	10	100	6.28	21.8	2910	Brown color
1218	24	10	240	6.31	21.6	2909	Brown color
1230	36	10	360	6.30	21.8	2895	clear color
1241	47	10	470	6.31	22.0	2926	
1250	56	10	560	6.33	21.8	2889	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-08B	1255	plastic	250 ml	1	EPA 300.0	none	filtered
DUP 110909	1255						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-5-09
Well ID:	BMO-2008-08M	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	1210'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	298.81'
Casing Volume (gals):	930
3 Casing Volumes (gals):	2790

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1044							
1049	5	13	65	7.44	21.8	611	
1134	50	13	650	7.41	23.5	623	
1219	95	13	1235	7.25	24.8	667	
1304	140	13	1820	7.32	25.2	692	
1349	185	13	2405	7.32	25.3	682	
1419	215	13	2795	7.30	25.4	675	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-08M	1422	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-3-09
Well ID:	BMO-2008-09M	Weather:	Sunny, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	775'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	286.55'
Casing Volume (gals):	499
3 Casing Volumes (gals):	1497

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1244							
1247	3	14	42	8.48	23.3	500	
1319	35	14	490	7.92	24.3	556	
1339	55	14	774	7.84	24.6	552	
1359	75	14	1050	7.81	24.9	554	
1431	107	14	1498	7.82	24.9	552	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-09M	1436	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-2-09
Well ID:	BMO-2008-10GU	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	449'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	289.77
Casing Volume (gals):	163
3 Casing Volumes (gals):	489

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1446							
1451	5	6	30	6.33	20.7	3148	
1516	30	6	180	6.24	21.9	3140	
1536	50	6	300	6.38	21.7	3275	
1556	70	6	420	6.28	21.8	3178	
1608	82	6	492	6.27	21.8	3157	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-10GU	1610	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-2-09
Well ID:	BMO-2008-10GL	Weather:	sunny, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	810'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	~~[illegible]~~
Casing Volume (gals):	509.43
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1125							
1138	13	5	65	6.49	24.9	3329	
1158	33	5	165	6.50	25.9	3234	
1225	60	5	300	6.51	26.2	2871	
1300	95	5	475	6.46	26.4	2786	
1330	125	5	625	6.51	26.4	2729	
1400	155	5	775	6.47	26.6	2690	
1430	185	5	925	6.52	26.7	2565	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-10GL	1434	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-9-09
Well ID:	BMO-2008-11G	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	760'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	573.41'
Casing Volume (gals):	191
3 Casing Volumes (gals):	573

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1343							
1351	8	8	64	7.91	25.2	350	
1407	24	8	192	8.05	25.2	343	
1423	40	8	320	8.05	25.4	340	
1441	58	8	464	8.04	25.5	339	
1455	72	8	576	8.03	25.5	339	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-11G	1458	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-28-09
Well ID:	BMO-2008-13B	Weather:	cloudy, windy, cold, wet
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	474'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	207.08'
Casing Volume (gals):	273
3 Casing Volumes (gals):	819

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1645							
1650	5	16	80	6.87	17.6	2080	
1705	20	16	320	7.02	20.3	2287	
1720	35	16	560	6.76	20.2	2240	
1730	45	16	720	6.77	20.0	2260	
1737	52	16	832	6.81	19.7	2259	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-13B	1744	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-28-09
Well ID:	BMO-2008-13M	Weather:	cloudy, windy, cold, wet
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	1030'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	208.91'
Casing Volume (gals):	838
3 Casing Volumes (gals):	2514

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0816							
0827	11	6	66	8.92	19.3	1311	
0927	71	6	426	8.80	20.3	1300	
1027	131	6	786	9.06	20.8	1255	
1130	194	6	1164	8.85	21.1	1268	
1230	254	6	1524	8.36	20.6	1346	
1330	314	6	1884	8.24	21.8	1355	
1430	374	6	2244	8.13	21.8	1344	
1515	419	6	2514	8.12	21.4	1347	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BMO-2008-13M	1518	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	12-16-09
Well ID:	BURKE	Weather:	sunny, windy, cold
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	781'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0800							
1223	263	2	526	7.23	25.1	493	
1229	269	2	538	7.27	25.6	489	
1234	274	2	548	7.28	25.7	488	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
BURKE	1238	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: pump has been running since 0800.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-13-09
Well ID:	CHAMBERS	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	245'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1205							
1210	5	12	60	7.29	23.0	413	
1215	10	12	120	7.37	22.8	410	
1220	15	12	180	7.43	22.6	412	
1225	20	12	240	7.41	22.7	414	
1230	25	12	300	7.41	22.6	410	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
CHAMBERS	1233	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * unable to remove sounding tube cap due to well design.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-22-09
Well ID:	COB MW-1	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	420'
Casing Diameter (in):	8"
Static Water Level (ft bmp):	234.69'
Casing Volume (gals):	484
3 Casing Volumes (gals):	1452

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0741							
0752	11	12	132	7.01	20.7	1386	
0812	31	12	372	6.86	21.6	1499	
0832	51	12	612	6.82	21.8	1523	
0852	71	12	852	6.89	21.9	1550	
0912	91	12	1092	6.78	22.4	1553	
0932	111	12	1332	6.72	22.3	1577	
0942	121	12	1452	6.81	22.3	1582	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COB MW-1	0947	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-22-09
Well ID:	COB MW-2	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	170'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	125.33'
Casing Volume (gals):	30
3 Casing Volumes (gals):	90

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1200							
1202	2	7	14	7.09	21.9	462	
1206	6	7	42	7.16	21.1	451	
1209	9	7	63	7.21	21.1	461	
1213	13	7	91	7.24	21.0	454	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COB MW-2	1214	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-22-09
Well ID:	COB MW-3	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	269'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	118.03'
Casing Volume (gals):	99
3 Casing Volumes (gals):	297

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1023							
1025	2	24	48	7.28	21.6	479	
1028	5	24	120	7.35	21.4	466	
1031	8	24	192	7.36	21.3	464	
1034	11	24	264	7.40	21.3	467	
1036	13	24	312	7.40	21.3	466	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COB MW-3	1037	plastic	250 ml	1	EPA 300.0	none	filtered
DUP102209	1037						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-22-09
Well ID:	COB WL	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	150'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	62.82'
Casing Volume (gals):	57
3 Casing Volumes (gals):	171

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1254							
1257	3	7	21	6.85	22.4	971	
1303	9	7	63	6.87	21.5	972	
1309	15	7	105	7.13	22.2	968	
1314	20	7	140	7.18	22.2	972	
1319	25	7	175	7.17	22.4	988	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COB WL	1321	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-20-09
Well ID:	COLLINS	Weather:	Cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	320'
Casing Diameter (in):	4.5"
Static Water Level (ft bmp):	290.52'
Casing Volume (gals):	25
3 Casing Volumes (gals):	75

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1211							
1216	5	12	60	6.53	23.1	1427	
1220	9	12	108	6.57	22.1	1422	
1223	12	12	144	6.60	21.9	1432	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COLLINS	1227	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-14-09
Well ID:	COOPER	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	325'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1329							
1334	5	7	35	7.68	25.2	423	
1339	10	7	70	7.80	24.4	417	
1344	15	7	105	7.83	24.5	~~423~~ 418	
1351	22	7	154	7.85	24.5	415	
1354	25	7	175	7.85	24.6	423	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COOPER	1358	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * No access for WL reading.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-12-09
Well ID:	COOPER C	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	220'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	156.89'
Casing Volume (gals):	93
3 Casing Volumes (gals):	279

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08
Casing Volume = gallons/foot * water column (feet)	

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1143							
1200	17	10	170	6.62	23.2	1945	
1205	22	10	220	6.65	22.0	1873	
1211	28	10	280	6.70	21.8	1858	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
COOPER C	1214	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-6-09
Well ID:	DODSON	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	87.27'
Casing Volume (gals):	166
3 Casing Volumes (gals):	498

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0956							
1004	8	14	112	7.00	21.7	1107	
1015	19	14	266	7.07	21.1	1130	
1026	30	14	420	7.07	21.1	1145	
1032	36	14	504	7.07	21.1	1140	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
DODSON	1035	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-5-09
Well ID:	DOUGLASS 791	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	31.49'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-5-09
Well ID:	DOUGLASS 792	Weather:	Cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	@ 5"
Static Water Level (ft bmp):	86.19'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-14-09
Well ID:	DURAZO	Weather:	Sunny, Cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	N/A
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0856							
0909	13	8	104	7.20	21.2	1057	
0919	23	8	184	7.18	21.8	1050	
0929	33	8	264	7.18	21.8	1045	
0936	40	8	320	7.18	21.9	1044	
0941	45	8	360	7.17	21.9	1048	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
DURAZO	0945	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * unable to get WL due to sounding port cap being rusted on.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-8-09
Well ID:	EAST	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	125'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	60.95'
Casing Volume (gals):	95
3 Casing Volumes (gals):	285

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1348							
1352	4	12	48	7.17	21.5	590	
1357	9	12	108	7.23	20.8	593	
1402	14	12	168	7.28	20.7	592	
1407	19	12	228	7.26	20.7	596	
1412	24	12	288	7.29	20.8	593	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
EAST	1416	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	EPPELE 641	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	265'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	29.92'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0852							

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
EPPELE 641		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only. Pump not working.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-6-09
Well ID:	FLEMING	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	400'
Casing Diameter (in):	
Static Water Level (ft bmp):	307.84' (mp=surface casing)
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-12-09
Well ID:	FRANCO	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1241							
1245	4	12	48	7.12	24.4	1500	
1250	9	12	108	7.13	23.9	1491	
1256	15	12	180	7.18	23.9	1495	
1301	20	12	240	7.20	24.0	1492	
1306	25	12	300	7.16	24.2	1493	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
FRANCO	1310	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: *unable to get WL, due to obstruction in well. Well is used for four house.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-8-09
Well ID:	FULTZ	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	300'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	56.16'
Casing Volume (gals):	359
3 Casing Volumes (gals):	1077

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1120							
1127	7	10	70	6.95	21.7	1244	
1149	29	10	290	7.00	21.3	1253	
1209	49	10	490	7.02	21.3	1213	
1230	70	10	700	6.98	21.5	1231	
1250	90	10	900	6.99	21.6	1259	
1308	108	10	1080	7.00	21.6	1262	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
FULTZ	1312	plastic	250 ml	1	EPA 300.0	none	filtered
DUP100809	1312						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-14-09
Well ID:	GARNER 557	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	300'
Casing Diameter (in):	
Static Water Level (ft bmp):	192.82'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-14-09
Well ID:	GARNER 635	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	680'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	196.36'
Casing Volume (gals):	492
3 Casing Volumes (gals):	1476

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1149							
1157	8	12	96	7.53	25.8	454	
1202	13	12	156	7.58	25.1	444	
1208	19	12	228	7.54	25.1	441	
1215	26	12	312	7.58	25.2	446	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
GARNER 635	1220	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * water was running two hours prior to arrival (~1440 gallons purged). Initial WL reading was 198.14' @ 1145. WL reading @ 1313 was 196.36' (53 minute recovery).

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-11-09
Well ID:	GGOOSE 547	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	800'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	237.66'
Casing Volume (gals):	827
3 Casing Volumes (gals):	2481

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1350							
1355	5	20	100	7.11	23.2	884	
1415	25	20	500	7.15	22.9	889	
1435	45	20	900	7.13	23.1	895	
1455	65	20	1300	7.14	23.1	899	
1515	85	20	1700	7.14	23.2	897	
1535	105	20	2100	7.15	23.1	898	
1555	125	20	2500	7.15	23.1	897	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
GGOOSE 547	1556	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-10-09
Well ID:	GL-03	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	820'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	655.31'
Casing Volume (gals):	108
3 Casing Volumes (gals):	324

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
[illegible]							
[illegible]58	7	10	70	7.23	24.1	642	
[illegible]10	19	10	190	7.14	26.2	671	
[illegible]13	22	10	220	—	—	—	flowrate dropped to 3gpm
[illegible]18	27	3	235	7.10	26.3	653	
0928	37	3	265	6.95	26.1	712	
0938	47	3	295	6.93	26.9	708	
0948	57	3	325	6.96	27.0	692	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
GL-03	0950	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-12-09
Well ID:	GOAR RANCH	Weather:	Cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	250'
Casing Diameter (in):	
Static Water Level (ft bmp):	185.72'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-15-09
Well ID:	HOBAN	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	316'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	165.00'
Casing Volume (gals):	222
3 Casing Volumes (gals):	666

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1000							
1006	6	12	72	6.83	22.0	1428	
1016	16	12	192	6.85	22.1	1434	
1026	26	12	312	6.79	22.4	1487	
1036	36	12	432	6.79	22.5	1495	
1046	46	12	552	6.81	22.5	1470	
1056	56	12	672	6.75	22.7	1487	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
HOBAN	1100	plastic	250 ml	1	EPA 300.0	none	filtered
DUP101509	1100						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-12-09
Well ID:	HOWARD	Weather:	Cloudy, cool, windy
ADWR No:		Sampler:	

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	152.08'
Casing Volume (gals):	71
3 Casing Volumes (gals):	213

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1344							
1348	4	14	56	6.98	21.7	1263	
1352	8	14	112	6.94	21.5	1321	
1356	12	14	168	6.92	21.4	1378	
1400	16	14	224	6.89	21.4	1414	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
HOWARD	1403	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-13-09
Well ID:	KEEFER	Weather:	Cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	245'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	136.67'
Casing Volume (gals):	160
3 Casing Volumes (gals):	480

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0846							
0856	10	11	110	7.36	20.7	474	
0906	20	11	220	7.33	20.6	478	
0916	30	11	330	7.28	20.8	507	
0926	40	11	440	7.28	20.9	490	
0930	44	11	484	7.24	20.7	516	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
KEEFER	0933	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-12-09
Well ID:	MCCONNELL 26S	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	216'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	158.13'
Casing Volume (gals):	86
3 Casing Volumes (gals):	258

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1429							
1434	5	11	55	6.69	22.6	1580	
1439	10	11	110	6.72	21.7	1582	
1444	15	11	165	6.77	21.6	1596	
1449	20	11	220	6.78	21.7	1595	
1453	24	11	264	6.77	21.7	1594	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
MCCONNELL 26S	1457	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-14-09
Well ID:	METZLER	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	351'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	287.99'
Casing Volume (gals):	93
3 Casing Volumes (gals):	279

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1010							
1017	7	6	42	7.13	22.0	985	
1027	17	6	102	7.11	22.3	972	
1037	27	6	162	7.11	22.5	975	
1047	37	6	222	7.11	22.6	980	
1057	47	6	282	7.10	22.7	989	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
METZLER	1101	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-13-09
Well ID:	MOORE	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	220'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1116							
1121	5	10	50	7.36	23.1	429	
1126	10	10	100	7.34	22.7	429	
1131	15	10	150	7.34	22.6	426	
1136	20	10	200	7.33	22.5	428	
1141	25	10	250	7.36	22.6	429	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
MOORE	1144	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * No well access (well covered w/ dirt).

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-14-09
Well ID:	MOROYOQVI	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	Dry
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only,

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-12-09
Well ID:	NESS	Weather:	sunny, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	812'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	537.34'
Casing Volume (gals):	281
3 Casing Volumes (gals):	843

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1136							
1138	2	15	30	7.39	23.5	556	
1148	12	15	180	7.53	23.6	542	
1200	24	15	360	7.56	23.8	539	
1211	35	15	525	7.55	23.9	537	
1223	47	15	705	7.53	24.2	541	
1233	57	15	855	7.53	24.5	537	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NESS	1240	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-05-09
Well ID:	NOTEMAN	Weather:	Cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	400'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1227							
1233	6	9	54	6.42	24.6	1450	
1238	11	9	99	6.46	24.1	1439	
1242	15	9	135	6.48	24.1	1435	
1247	20	9	180	6.48	24.1	1442	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NOTEMAN	1252	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * unable to get water level due to obstruction in well. Will purge well until parameters are stable.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	NSD-2	Weather:	Cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	101.17'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	NSD-3	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Tayler

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	85.62'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: *WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	NWC-02	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	312'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1327	—	115	—	7.32	22.6	436	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NWC-02	1333	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: Well has been pumping most of day. Supplies water for community and local school.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	NWC-03	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	312'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
~~123~~							
1231	—	55	—	6.87	22.6	1260	
1235	—	55	—	6.88	21.9	1233	
1238	—	55	—	6.94	21.8	1224	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NWC-03	1240	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: well has been running for about 3 hours prior to arrival.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	NWC-03 CAP	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	131.60'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	NWC-04	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	795'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1156	—	30	—	7.02	24.2	907	
1159	—	30	—	7.14	24.5	881	
1202	—	30	—	7.18	24.3	875	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NWC-04	1204	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: Well has been running most of morning.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	5.0	Date:	11-18-09
Well ID:	NWC-04	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0930							
1016	46	30	1380	7.16	22.9	913	
1022	52	30	1560	7.23	23.0	912	
1025	55	30	1650	7.24	22.9	909	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NWC-04	1027	Plastic	250 ml	1	EPA 300.0	None	

Additional Comments: Monthly sulfate trend sampling.

EPA 300.0 Sulfate Only

Well has been running for about 45 minutes today @ 30 gpm.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	5.0	Date:	12-16-09
Well ID:	NWC-04	Weather:	sunny, windy, cold
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	795'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1108							
1118	10	30	300	7.21	21.8	935	
1123	15	30	450	7.28	22.1	923	
1127	19	30	570	7.28	22.3	926	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NWC-04	1129	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: Monthly sulfate trend sampling.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-21-09
Well ID:	NWC-06	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	410'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1304	—	174	—	7.26	23.2	413	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
NWC-06	1310	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: pump has been running several hours prior to arrival.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-5-09
Well ID:	OSBORN	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	258'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	75.09'
Casing Volume (gals):	269
3 Casing Volumes (gals):	807

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1344							
1353	9	8	72	6.97	23.2	613	
1404	20	8	160	7.15	22.5	600	
1414	30	8	240	7.15	22.6	600	
1424	40	8	320	7.16	22.6	601	
1434	50	8	400	7.14	22.8	600	
1444	60	8	480	7.14	22.9	599	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
OSBORN	1447	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-5-09
Well ID:	PALMER	Weather:	Cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	220'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1629	—	—	—	7.81	22.2	538	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
PALMER	1633	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * Sample taken from tank, no access to well.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-6-09
Well ID:	PANAGAKOS	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	167.20'
Casing Volume (gals):	49
3 Casing Volumes (gals):	147

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0858							
0905	7	7	49	6.84	20.8	1340	
0912	14	7	98	6.85	21.1	1290	
0919	21	7	147	6.83	21.1	~~1328~~ 1328	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
PANAGAKOS	0924	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-20-09
Well ID:	PARRA	Weather:	Cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	355'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1100							
1105	5	8	40	6.76	22.2	1189	
1115	15	8	120	6.76	22.2	1193	
1125	25	8	200	6.79	22.3	1182	
1135	35	8	280	6.79	22.3	1186	
1140	40	8	320	6.80	22.5	1188	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
PARRA	1143	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: *Unable to get WL. Metal tip of sounder broke off and is stuck @ about 60'. Will purge well based on last quarter's data.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	PIONKE	Weather:	cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	300'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	150.96'
Casing Volume (gals):	220
3 Casing Volumes (gals):	660

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1158							
1206	8	29	232	7.27	22.6	1068	
1216	18	29	522	7.36	21.0	1103	
1221	23	29	667	7.42	20.9	1100	
1224	26	29	754	7.43	21.1	1100	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
PIONKE	1226	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-20-09
Well ID:	POOL	Weather:	cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	313'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	206.06'
Casing Volume (gals):	158
3 Casing Volumes (gals):	474

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0852							
0906	14	10	140	7.21	20.7	591	
0915	23	10	230	7.18	21.3	579	
0922	30	10	300	7.18	21.2	577	
0932	40	10	400	7.21	21.2	577	
0940	48	10	480	7.22	21.2	577	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
POOL	0943	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-6-09
Well ID:	RAMIREZ	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	300'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	160.36'
Casing Volume (gals):	206
3 Casing Volumes (gals):	618

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1348							
1354	6	12	72	7.28	23.7	399	
1408	20	12	240	7.32	23.4	389	
1418	30	12	360	7.32	23.5	390	
1428	40	12	480	7.29	23.6	390	
1440	52	12	624	7.30	23.8	388	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
RAMIREZ	1443	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	RAY	Weather:	Cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	100'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	49.87'
Casing Volume (gals):	74
3 Casing Volumes (gals):	222

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1039							
1044	5	8	40	6.88	21.9	1312	
1050	11	8	88	6.96	21.3	1269	
1055	16	8	128	6.98	21.5	1297	
1100	21	8	168	6.98	21.5	1284	
1107	28	8	224	6.98	21.3	1288	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
RAY	1110	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	872.0000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-19-09
Well ID:	ROGERS 596	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	290'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	132.38
Casing Volume (gals):	247
3 Casing Volumes (gals):	741

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1305							
1312	7	9	63	6.75	23.7	1409	
1330	25	9	225	6.85	23.1	1360	
1350	45	9	405	6.91	23.2	1356	
1410	65	9	585	6.92	23.3	1355	
1428	83	9	747	6.89	23.3	1360	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
ROGERS 596	1437	Plastic	250ml	1	EPA 300.0	none	filtered

Additional Comments: * specific conductance is double from 3rd quarter. SAMPLE WAS PREVIOUSLY IDENTIFIED AS "ROGERS 803".

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-5-09
Well ID:	ROGERS 596	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Tayler

WELL DATA

Well Depth (ft bls):	290'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	135.28'
Casing Volume (gals):	247
3 Casing Volumes (gals):	741

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0815							
0825	10	9	90	6.80	20.4	1467	
0840	25	9	225	6.77	21.7	1447	
0850	35	9	315	6.78	21.7	1445	
0910	55	9	495	6.78	21.7	1427	
0925	70	9	630	6.79	21.9	1417	
0938	83	9	747	6.79	21.9	1418	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
ROGERS 596	0942						

Additional Comments: * specific conductance is double the 3rd qurtr.

CONFIRMATION SAMPLE ROGERS 596 Collected 10-19-2009

RUN TURBIDIMETRIC 375.4 RUSH DRS

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-19-09
Well ID:	ROGERS 750	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	140'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	132.38'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-6-09
Well ID:	ROGERS E	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Tayler

WELL DATA

Well Depth (ft bls):	290'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	150.76'
Casing Volume (gals):	205
3 Casing Volumes (gals):	615

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1556							
1601	5	11	55	7.22	23.0	408	
1611	15	11	165	7.26	22.5	404	
1621	25	11	275	7.29	22.4	403	
1631	35	11	385	7.31	22.2	407	
1641	45	11	495	7.30	22.4	406	
1652	56	11	616	7.31	22.3	407	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
ROGERS E	1657	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-28-09
Well ID:	RUIZ	Weather:	cloudy, cold, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	312'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	295.33'
Casing Volume (gals):	25
3 Casing Volumes (gals):	75

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1609							
1614	5	5	25	7.03	19.7	928	
1619	10	5	50	7.08	20.5	935	
1624	15	5	75	7.09	20.6	920	
~~1625~~							

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
RUIZ	1627	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-6-09
Well ID:	SCHWARTZ	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	305'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	124.55'
Casing Volume (gals):	266
3 Casing Volumes (gals):	798

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1142							
1147	5	9	45	7.25	22.5	614	
1157	15	9	135	7.23	22.2	606	
1216	34	9	306	7.27	22.1	604	
1231	49	9	441	7.29	22.1	602	
1247	65	9	585	7.29	22.4	609	
1259	77	9	693	7.28	22.2	606	
1311	89	9	801	7.27	22.5	613	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
SCHWARTZ	1314	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-7-09
Well ID:	STEPHENS	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	50.33'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-05-09
Well ID:	SUNBELT	Weather:	cloudy, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	380'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	dry
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-05-09
Well ID:	SWAN	Weather:	Cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	98'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	35.12'
Casing Volume (gals):	41
3 Casing Volumes (gals):	123

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1515							
1519	4	12	48	7.03	21.9	505	
1522	7	12	84	7.14	21.6	491	
1526	11	12	132	7.18	21.4	496	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
SWAN	1530	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-4-09
Well ID:	TM-02A	Weather:	Sunny, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	925'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	348.97'
Casing Volume (gals):	375
3 Casing Volumes (gals):	1125

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1040							
1043	3	9	27	8.76	21.9	341	
1103	23	9	207	7.96	23.8	387	
1125	45	9	405	8.06	24.7	380	
1145	65	9	585	8.07	25.1	380	
1205	85	9	765	8.13	25.3	380	
1225	105	9	945	8.15	25.8	382	
1245	125	9	1125	8.16	26.3	381	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-02A	1248	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-10-09
Well ID:	TM-03	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	125.38'
Casing Volume (gals):	49
3 Casing Volumes (gals):	147

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1244							
1248	4	12	48	7.44	22.2	759	
1255	11	12	132	7.47	21.8	758	
1258	14	12	168	7.55	21.8	761	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-03	1301	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-12-09
Well ID:	TM-06 MILLER	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	158.96'
Casing Volume (gals):	27
3 Casing Volumes (gals):	81

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1024							
1026	2	12	24	7.18	20.6	572	
1029	5	12	60	7.48	20.4	535	
1031	7	12	84	7.53	20.4	530	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-06 MILLER	1034	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-3-09
Well ID:	TM-07	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	350'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08
Casing Volume = gallons/foot * water column (feet)	

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0859							
0901	2	10	20	7.70	21.0	460	well dry
0916	—	—	—	—	—	—	Pump on
0918	4	10	40	7.73	21.4	421	well dry
0933	—	—	—	—	—	—	Pump on
0935	6	10	60	7.85	21.8	441	Well dry

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-07	0952	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: obstruction in well

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-3-09
Well ID:	TM-15 MILLER	Weather:	Sunny, Cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	325'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08
Casing Volume = gallons/foot * water column (feet)	

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1129							
1132	3	7	21	7.89	23.2	437	
1138	9	7	63	7.80	23.1	414	
1144	15	7	105	7.74	23.3	418	
1149	20	7	140	7.73	23.4	414	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-15 MILLER	1151	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-10-09
Well ID:	TM-16	Weather:	Sunny, cool, windy
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	115'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	82.83'
Casing Volume (gals):	21
3 Casing Volumes (gals):	63

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1346							
1348	2	17	34	6.83	21.9	1301	
1350	4	17	68	6.97	21.2	1314	
1352	6	17	102	7.02	21.0	1310	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-16	1355	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-4-09
Well ID:	TM-19A	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	700'
Casing Diameter (in):	4"
Static Water Level (ft bmp):	201.16'
Casing Volume (gals):	325
3 Casing Volumes (gals):	975

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0900							
0910	10	34	340	7.65	22.4	505	
0915	15	34	510	7.50	23.7	526	
0920	20	34	680	7.49	24.0	523	
0925	25	34	850	7.46	24.1	523	
0929	29	34	986	7.47	24.2	522	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-19A	0930	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-3-09
Well ID:	TM-42	Weather:	Sunny, Cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	250'
Casing Diameter (in):	5"
Static Water Level (ft bmp):	213.05'
Casing Volume (gals):	38
3 Casing Volumes (gals):	114

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1029							
1032	3	4	12	6.95	21.9	1297	
1039	10	4	40	7.05	22.1	1281	
1049	20	4	80	7.05	22.9	1263	
1058	29	4	116	7.07	23.1	1266	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TM-42	1100	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-19-09
Well ID:	TVI 236	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	222'
Casing Diameter (in):	12"
Static Water Level (ft bmp):	123.88'
Casing Volume (gals):	577
3 Casing Volumes (gals):	1731

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1054	—	550	—	7.31	22.1	513	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TVI 236	1101	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * pump has been running from night til early morning.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-19-09
Well ID:	TVI 713	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	
Static Water Level (ft bmp):	127.79'
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
		plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * WL only

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-19-09
Well ID:	TVI 875	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	330'
Casing Diameter (in):	8"
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1136							
1143	7	500	3500	7.15	23.5	852	
1148	12	500	6000	7.21	21.9	846	
1153	17	500	8500	7.23	21.9	844	
1158	22	500	11000	7.23	21.9	822	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
TVI 875	1207	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-20-09
Well ID:	WEED	Weather:	Cloudy, windy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	320'
Casing Diameter (in):	
Static Water Level (ft bmp):	N/A
Casing Volume (gals):	N/A
3 Casing Volumes (gals):	N/A

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
1246							
1251	5	15	75	7.24	22.3	389	
1255	9	15	135	7.30	21.7	383	
1258	12	15	180	7.33	21.6	377	
1301	15	15	225	7.34	21.6	381	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
WEED	1303	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments: * No sounding port on well.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-15-09
Well ID:	WEISKOPF	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	200'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	145.66'
Casing Volume (gals):	80
3 Casing Volumes (gals):	240

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0906							
0917	11	8	88	6.92	20.6	1219	
0923	17	8	136	6.91	21.3	1229	
0931	25	8	200	6.89	21.4	1220	
0936	30	8	240	6.89	21.4	1216	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
WEISKOPF	0938	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-13-09
Well ID:	ZANDER	Weather:	Cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	280'
Casing Diameter (in):	6"
Static Water Level (ft bmp):	146.77'
Casing Volume (gals):	196
3 Casing Volumes (gals):	588

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08
Casing Volume = gallons/foot * water column (feet)	

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments
0959							
1005	6	12	72	7.32	21.9	422	
1013	16	12	192	7.39	21.7	411	
1028	29	12	348	7.39	21.7	411	
1038	39	12	468	7.35	21.7	408	
1048	49	12	588	7.41	21.7	407	

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
ZANDER	1052	plastic	250 ml	1	EPA 300.0	none	filtered

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-8-09
Well ID:	FB100809/EQB100809	Weather:	cloudy, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
FB100809	1220	plastic	250 ml	1	EPA 300.0	none	filtered
EQB100809	1227						

Additional Comments: *FULTZ site.

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-15-09
Well ID:	EQB101509/FB101509	Weather:	Sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
EQB101509	1036	plastic	250 ml	1	EPA 300.0	none	filtered
~~FBQB10~~							
FB101509	1039						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-22-09
Well ID:	EQB102209/FB102209	Weather:	sunny, cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
EQB102209	1103	plastic	250 ml	1	EPA 300.0	none	filtered
FB102209	1104						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	10-29-09
Well ID:	EQB102909/FB102909	Weather:	Sunny, cold
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity

Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
EQB102909	0948	plastic	250 ml	1	EPA 300.0	none	filtered
FB102909	0950						

Additional Comments:

HYDRO GEO CHEM, INC.

Groundwater Sampling Form

Project No:	8720000	Client:	Freeport Copper Queen Branch
Task No:	2.2	Date:	11-09-09
Well ID:	EQB110909/FB110909	Weather:	Sunny, Cool
ADWR No:		Sampler:	Travis Taylor

WELL DATA

Well Depth (ft bls):	
Casing Diameter (in):	
Static Water Level (ft bmp):	
Casing Volume (gals):	
3 Casing Volumes (gals):	

Casing Capacity	
Nominal Size (inches)	Gallons per Linear Foot
2	0.16
4	0.65
5	1.02
6	1.47
8	2.61
10	4.08

Casing Volume = gallons/foot * water column (feet)

FIELD SAMPLING DATA

Time	Elapsed Time (min)	Discharge Rate (gpm)	Total Discharge (gallons)	pH (SU)	Temp (°C)	Specific Conductance (µS/cm)	Comments

SAMPLE INFORMATION

Sample ID	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Comments
EQB110909	1237	plastic	250 ml	1	EPA 300.0	none	filtered
FB110909	1239						

Additional Comments: